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PREFACE.

By Joseph Swain,

President of Swarthmore College and Chairman Committee on Salaries, Tenure, and Pensions, National Education Association.

Since the appointment of the committee on salaries, tenure, and pensions in October of 1911 there have been published by the committee, or by the United States Bureau of Education in cooperation with it, about 1,000 pages of literature, chiefly on teachers' salaries. The report of January, 1913, on teachers' salaries and cost of living, was an extensive study of economic conditions of teachers in four representative cities in different parts of the country—namely, Cincinnati, New Haven, Atlanta, and Denver. Bulletin of the Bureau of Education, 1914, No. 16, "The Tangible Rewards of Teaching," was a detailed statement of salaries paid to the several classes of teachers and school officers in different parts of the United States. Bulletin, 1915, No. 31, of the Bureau of Education was a comparative study of salaries of teachers and school officers. The study of these three publications will make clear to any impartial and enlightened observer that salaries of teachers in the United States are not large enough to provide properly for the numerous financial demands that their work makes upon them. (See "Teachers' Salaries and Cost of Living," pp. 234–235.) The overwhelming consensus of view of intelligent people in all walks of life who are familiar with present conditions in the United States is that not only must salaries be increased, but some kind of a retiring allowance in the form of a pension or annuity must be provided for all public school-teachers if we are to have a profession of teaching.

The studies thus far made naturally led the committee to the study of pensions. The subject is both a scientific and a social question. Many pension systems have failed because they had no sound economic basis. A system may have a sound economic basis and not be in a form acceptable to those who participate in it. The committee has brought experts, who have worked out the scientific basis on sound economic grounds, and the teacher and public-school officer together in the hope that we may have better pension legislation, both sound in theory and acceptable in practice. This has been the purpose of a series of conferences held at Oakland, Detroit, and in New York City. It has been found that the subject of pensions is little understood and that much legislation has been more than useless. But it is clear that by cooperation of teachers, officers, experts, and the public a safe, sound, and efficient system can be secured in all parts of the United States.

The work of the committee this year has been in two directions. In cooperation with the Bureau of Education the present bulletin has been prepared. The purpose of this bulletin is to show the extent of the teachers' pension movement in a brief and summary way and to collect in convenient form pension legislation for public school-teachers in the United States. This bulletin is a natural introduction to the report on teachers' pensions, which, at the request of the committee, is now being prepared for it by the Carnegie Foundation for the Advancement of Teaching.

STATE PENSION SYSTEMS FOR PUBLIC-SCHOOL TEACHERS.

INTRODUCTION.

Pension and retirement legislation for teachers has developed rapidly in the past four or five years. Local retirement funds have in most instances given way to State systems, and there has come a general realization that some plan of retirement for teachers is essential in an efficient public-school system. To show the extent of the teachers' pension movement in a brief and summary way is the purpose of this bulletin. No attempt is made to argue for or against any particular form of pension plan, or to go analytically into the history of the pension movement, since these have already been the subject of careful study by competent investigators. In the past half dozen years pension literature has been enriched by the report of the Massachusetts commission on old-age pensions, annuities, and insurance (Boston, 1910), which afforded a background for the careful study of teachers' pensions in the same State three years later; by various Government reports, including summaries of the pension situation for teachers in the United States and Europe, of which the more important are Senate Document No. 823, of the Sixty-first Congress, and Bulletin, 1913, No. 34 of the United States Bureau of Education (Teachers' Pensions in Great Britain); by "The Teacher and Old Age," Mr. Prosser's survey of teachers' retirement systems, which is especially significant in its statement of the case from the standpoint of social insurance; and by the numerous contributions of the Carnegie Foundation for the Advancement of Teaching, which, based on practical experience in the administration of college pensions, properly emphasize the fundamental actuarial problems involved in the making of pensions for any class of employees.[1]

The present bulletin seeks to show the existing situation in the various States; to outline the plans that have been adopted, and give some indication of the results; and to reproduce for the information of those studying teachers' pensions several of the pension laws now on the statute books.

STATES HAVING PENSION SYSTEMS.

State systems of pensions or retirement for public-school teachers are maintained in 33 States. Of these, 21 are State-wide in their application, 5 affect two or more cities in the State, and 7 apply to a single city or county.

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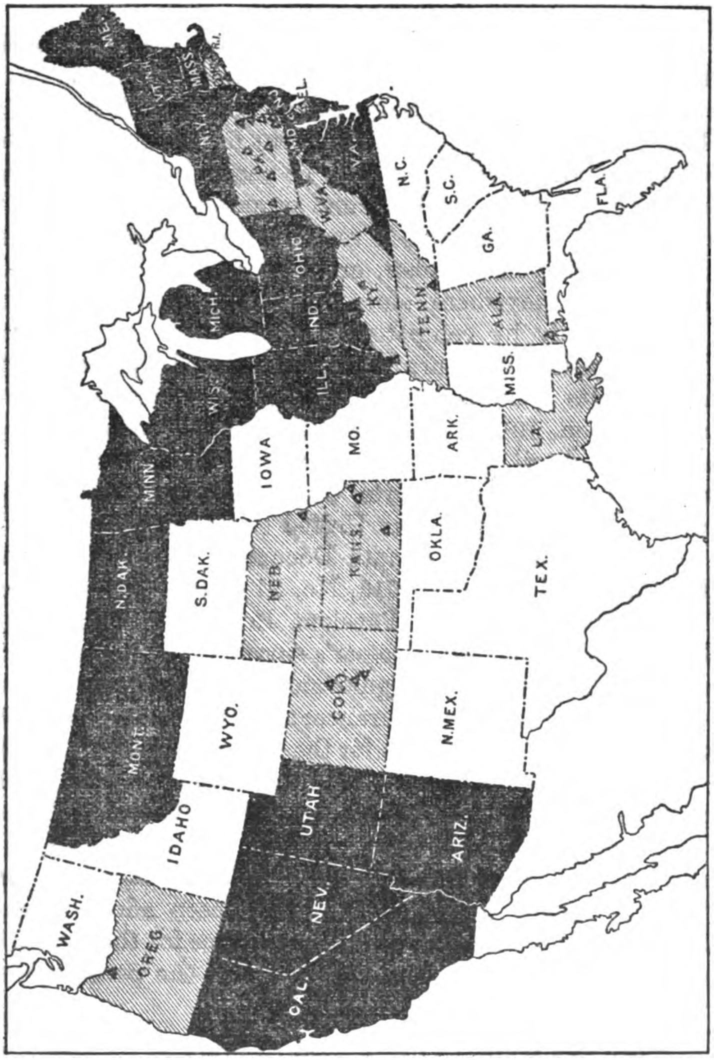
[1] See especially the Tenth Annual Report (1915) and Bulletin No. 9

The 21 States having State-wide pension systems are: Arizona, California, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New York, North Dakota, Ohio, Rhode Island, Utah, Vermont, Virginia, and Wisconsin.[1]



EXTENT OF THE TEACHERS' PENSION MOVEMENT.

■ States having State-wide pension systems for public-school teachers.
▨ States having teachers' pension laws that apply to certain cities or counties (localities indicated by △).
□ States without teachers' pension laws.

Of the other States, the Alabama system affects only Mobile County, which includes the city of Mobile; the Colorado law covers Denver, Pueblo, and Colorado Springs; Connecticut has separate laws affecting New Haven and New London; and Delaware's system is for

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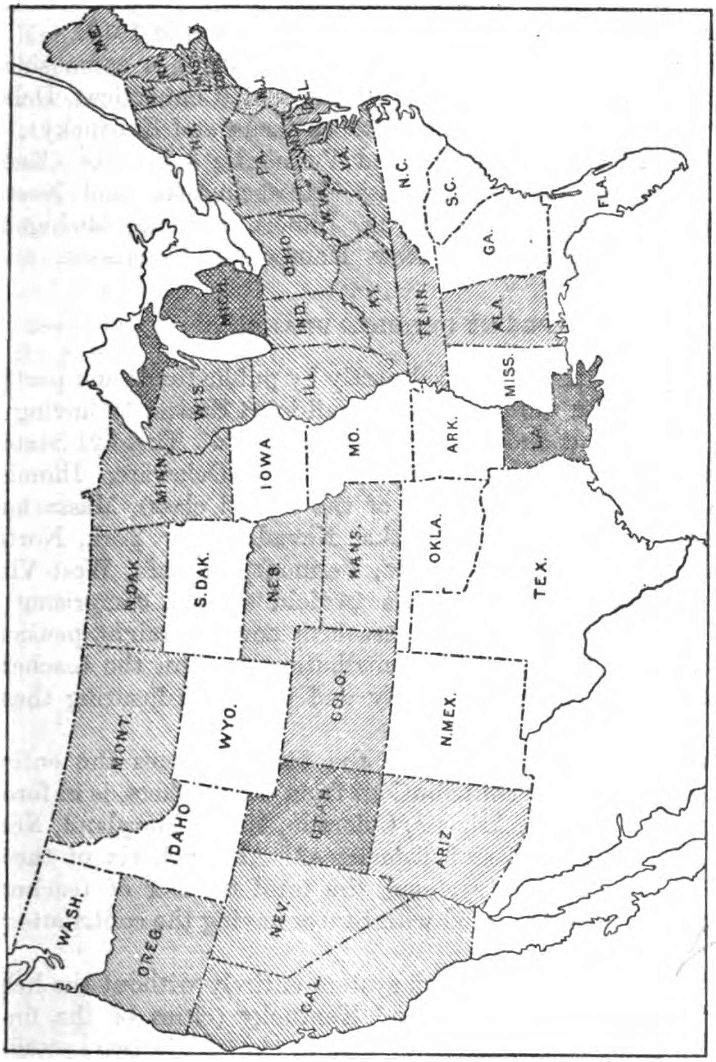
[1] In some of these States the law does not apply to teachers in cities that have already established retirement systems. (See table.)

Wilmington only. Pennsylvania has a local option law under which 11 cities have established retirement systems. The Kansas law affects "all cities of the first class"—Topeka, Kansas City, and Wichita. Kentucky has one law affecting Louisville ("all cities of the first class"), and another affecting Lexington, Covington, Newport, and Paducah ("all cities of the second class"). The Louisiana act applies to the city of New Orleans; the Nebraska law affects Omaha only; Oregon's optional law has been availed of by the city of Portland; Tennessee has a retirement system for Chattanooga, and the West Virginia law applies to the city of Wheeling.



TYPES OF TEACHERS' PENSION SYSTEMS.

▨ Contributory plan—Supported jointly by teachers and the public.
▨ Noncontributory plan—Maintained wholly by public funds.
▨ Supported by the teachers.
▨ Double system—One system maintained by the State; the other by the teachers (New Jersey).
NOTE.—The Louisville, Ky., plan is supported by the teachers.

DATES OF ESTABLISHMENT OF PENSION SYSTEMS.

The teachers' pension movement is a recent development in the United States. The teachers' retirement fund of New Jersey dates from 1896. The Ohio noncontributory plan was adopted in 1897. In 1907 Rhode Island established a State-wide retirement system on a noncontributory basis. Virginia enacted pension legislation in 1908, Colorado and Nebraska in 1909, and Louisiana in 1910.

Most of the development in teachers' pensions has come since 1911. Four States created systems in that year (Connecticut, Delaware, New York, Wisconsin); 2 in 1912 (Arizona and Kentucky); 4 in 1913 (California, Maine, Utah, and Vermont); 3 in 1914 (Kentucky—for cities of the second class—Massachusetts, and North Dakota); and 10 in 1915 (Alabama, Illinois, Indiana, Michigan, Minnesota, Montana, Nevada, New Hampshire, Tennessee, and West Virginia).

TYPES OF PENSION PLANS.

Contributory systems, supported partly by public funds and partly by contributions from the teachers, prevail in 21 States, 13 having a State-wide pension law and 8 having local systems. These 21 States are: California, Connecticut (New London), Delaware, Illinois, Indiana, Kansas, Kentucky (cities of the second class), Massachusetts, Minnesota, Montana, Nebraska, Nevada, New York, North Dakota, Ohio, Oregon, Pennsylvania, Vermont, Virginia, West Virginia, and Wisconsin. New Jersey's twofold system, comprising a retirement plan supported by the teachers and a straight pension paid by the State, is in effect a contributory system, the teachers insuring themselves against disability and the State insuring them against old age.

The noncontributory plan, where the State finances the entire scheme without the aid of contributions from the teachers, is in force in eight States—Alabama, Arizona, Colorado, Maine, Maryland, New Hampshire, Rhode Island, and Tennessee.[1] Although six of these are States with State-wide systems, the total number of teachers affected is not large as compared with States having the contributory system.[2]

The teachers finance the pension system entirely without the help of public funds in Utah, Michigan,[1] Kentucky (cities of the first class), and Louisiana (New Orleans), and in one of the two systems in New Jersey, as described elsewhere.[2]

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[1] For New Jersey, see preceding paragraph; see also Appendix C.

[2] For example, Arizona had 5 pensioners in 1916 and New Hampshire 65.

PROVISION FOR REFUNDS.

Few States make provision for refund of money paid in by teachers on the contributory plan. Massachusetts is the only State that refunds the total amount, with interest, in case of death or resignation. Indiana pays back the actual amount contributed, but without interest, and Utah refunds the full amount at death. In nine States—Kansas, Kentucky (Louisville), Louisiana, Michigan, Minnesota, North Dakota, Ohio, West Virginia, and Wisconsin—one-half the amount paid in is refunded in case of death or resignation. The Illinois plan allows a return of one-half the amount contributed if the teacher resigns before completing 15 years of service. The Kentucky system affecting cities of the second class provides for a refund of three-fourths the amount contributed, in case of death or resignation. Five States—Connecticut (New Haven), Kansas, Ohio, West Virginia, and Virginia—provide for full return of all amounts contributed in case of dismissal, Virginia adding interest at 6 per cent. In Delaware the payment of refunds is made optional with the board of retirement.

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[1] The constitutionality of the Michigan law is in question, however. See note to table.

[2] See table.

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STATE PENSION SYSTEMS FOR PUBLIC-SCHOOL TEACHERS.

States.	Year established.	Extent.	How supported.	Amount of pension paid.	Years of service before pension begins.	Amount required paid in before retirement.	Provision for refunds.	Administration.
Alabama	1915	"All counties having a population of 80,000 and less than 82,000" (Mobile County).	Appropriation from county school funds. Noncontributory system.	$240	30; must be 60 years of age and "without means of comfortable support."			County board of education.
Arizona	1912	State-wide	Appropriation from State. Noncontributory system.	$600	25			State department of public instruction.
California	1913	do	$12 per annum from teachers' salaries;[1] 5 per cent of inheritance and transfer tax; gifts; donations and appropriations by legislature. Contributory system.	$500; if incapacitated, a sum bearing the same ratio to $500 as time taught is to 30 years.	30; 15, including last 10, must have been in service in public schools of State; 15, if incapacitated.	$360		State board of education.
Colorado	1909	"All districts of the first class" (Denver, Pueblo, and Colorado Springs).	Special tax of one-tenth of 1 mill; gifts and bequests. Noncontributory system.	$480	25; 15 must have been in public schools of said district; 10, if incapacitated. Men must be at least 60 years of age, women, 55.			Board of school directors for the district.
Connecticut [2]	1911	New Haven only.	1 per cent of salary of teachers for 10 years; 2 per cent for over 10 years; gifts and bequests. Appropriation is permitted.	Minimum, $400; maximum, $800. Between minimum and maximum, annuity is one-half average annual salary for last 5 years' service.	30; last 20 in New Haven. 15, if incapacitated, last 10 in New Haven. Must be at least 65 years of age.	Amount equal to annuity for first year.	Amount contributed, without interest, is refunded in case of dismissal; in case of resignation no refund is made.	Two members of school board, member of aldermen, treasurer of city, and 1 teacher.
	1911	New London only.	1 per cent of salary of teachers; 5 per cent of liquor license; amount equal to 3 per cent of salary list and 5 per cent of excise fees; gifts and bequests. Contributory system.	One-half average annual salary for last 5 years' service.	30; last 15 in New London, 25, if incapacitated, last 15 in New London.		None	Board of retirement consisting of 5 members: Mayor, president of board of school visitors, superintendent of schools and 2 members of teaching force.

Delaware	1911	Wilmington only.	1 per cent of salary of teachers for 10 years, 2 per cent for 10 to 20 years, 3 per cent for more than 20 years; $1,000 annually by school board; $2,000 annually by city council; gifts and bequests. Contributory system.	$400; if service has been 20 to 25 years, a sum bearing the same ratio to $400 as time taught is to 35 years.	35; eligible to retirement; 30, if 65 years of age; 20, if incapacitated. At least 15 years must have been in Wilmington.	$400	Optional with board of retirement.	Board of retirement composed of certain officials and 3 teachers.
Illinois	1915	State-wide [3]	$1 from salary of teachers for first 5 months of each year for first 10 years; $2 for first 5 months of each year for 10 to 15 years; $6 for first 5 months for over 15 years for a period of 10 years; one-tenth of 1 mill on all taxable property in State (exclusive of cities and school districts not coming under the provisions of this act); gifts and bequests. Contributory system.	$16 annually for each year taught. Maximum, $400.	25, if 50 years of age; 15, if incapacitated. No age requirement if retired because incapacitated.	$400	In case of resignation before completing 15 years' service, one-half amount contributed is refunded	Board of trustees of State teachers' pension and retirement fund, consisting of 5 members: Superintendent of public instruction, State treasurer, and 3 other members elected by the bona fide contributors to the funds.
Indiana	[4] 1915	State-wide	$10 from salary of teachers for first 15 years; $20 for next 10 years; $25 for next 10 years; $20 for next 5 years; after 40 years no payment required; semiannual apportionment of State school tuition tax; gifts, bequests, and grants. Contributory system.	25 years, $350; 26 years, $375; 27 years, $400; 28 years, $425; 29 years, $450; 30 years, $475; 31 years, $500; 32 years, $525; 33 years, $550; 34 years, $575; 35 years, $600; 36 years, $620; 37 years, $640; 38 years, $660; 39 years, $680; 40 years, $700.	35; 25, if incapacitated. After 35 years' of teaching service, 12 years of which may have been outside of State, pension is granted for any cause whatsoever if beneficiary ceases to be employed in schools of State.	One-half maximum annuity.	In case of resignation, amount contributed, without interest, is refunded.	Board of trustees of Indiana State teachers' retirement fund, consisting of 5 members: State superintendent of public instruction, State auditor, attorney general, and 2 teachers or supervising teachers appointed by the governor.

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[1] Except in the case of rural and village teachers who are not paid by the 12-month payment system and contribute only $1 for each month of their teaching.

[2] System for New London will not be operative until fund amounts to $50,000. (Amount on hand March, 1916, $10,000.)

[3] Cities having a population in excess of 65,000 at 1910 census, operating a pension fund at time law took effect, do not come under the provisions of this act. (This excludes Chicago and Peoria.)

[4] There are other teachers' pension laws in force under which cities of certain classes may operate, though such cities may come under this 1915 law.

State pension system for public-school teachers—Continued.

States.	Year established.	Extent.	How supported.	Amount of pension paid.	Years of service before pension begins.	Amount required paid in before retirement.	Provision for refunds.	Administration.
Kansas	....	"All cities of the first class" (Topeka, Kansas City, and Wichita).	1 to 1½ per cent of salary of teachers; one and one-half times salary assessments from school funds; gifts and bequests. Contributory system.	$500; if incapacitated, such proportion of $500 as time taught is to 30 years.	30; 15 must have been in service in public schools of city; 25, if incapacitated, 15 must have been in service in public schools of city.	Not less than one-half the amount of first annuity.	In case of death or resignation, one-half amount paid in is refunded; if discharged, total amount paid in is refunded.	City board of education.
Kentucky	1912	"All cities of the first class" (Louisville).	1 per cent per annum from salary of teachers, not to exceed $10 for first 15 years; 2 per cent per annum, not to exceed $20 for succeeding 15 years; and gifts. Supported by teachers.	$400	40; 20, if incapacitated.	Amount equal to first annuity.	In case of death or resignation, one-half the amount paid in is refunded.	Board of trustees of teachers' retirement fund, consisting of 7 members.
	1914	"All cities of the second class" (Lexington, Covington, Newport, and Paducah).	1 per cent from salary of teachers for first 10 years; 2 per cent for succeeding 10 years, not to exceed $40 annually; tax of 1 cent on every $100 worth of taxable property. Contributory system.	$600	25; 15, if incapacitated.	do	In case of death or resignation, three-fourths the amount paid in is refunded.	Committee of 7 school officers and teachers.
Louisiana	1910	"Parish of Orleans" (City of New Orleans).	1 per cent per month from salary of teachers for 10 years; 1½ per cent per month for succeeding 10 years; 2 per cent per month from all teachers not engaged in classroom teaching; gifts, grants, and bequests. Supported by teachers.	Minimum, $300; maximum $600. Between minimum and maximum, annuity is one-half average annual salary for last 5 years preceding retirement.	30; 5, if incapacitated. Any teacher 65 years of age.	do	In case of death or resignation, one-half the amount paid in is refunded.	Board of trustees of teachers' retirement fund, consisting of 9 members: Superintendent of schools, 3 members of board of directors, and 5 members of teaching force. Members receive no compensation.

Maine	1913	State-wide	State appropriation of $25,000 annually. Noncontributory system.	25 years, $150; 30 years, $200; 35 years, $250.	35; 20 years, including last 15, must have been in service in public schools of the State. Must be at least 60 years of age.			
Maryland	1902	do	State appropriation of $34,000 annually. Noncontributory system.	$200	25, if 60 years of age and "without means of comfortable support."			State board of education.
Massachusetts	1914	do.[1]	Not less than 3 per cent, nor more than 7 per cent per annum from salary of teachers, minimum assessment, $35; maximum, $100; rate fixed annually by retirement board; present rate 5 per cent. Contributory system.	Annuity purchased by teachers' own contributions, with interest thereon, maximum, $500 at age of 60 and $750 at age of 70. State grants pension equal to annuity.	60 years of age, teacher is eligible to retirement; at 70 years of age, retirement is compulsory. After 60 years of age may be retired by school committee for unsatisfactory service.	Amount which will purchase an annuity of $500 at age of 60.	In case of death or resignation, total amount contributed, with interest, is refunded.	Teachers' retirement board, consisting of 7 members: Insurance commissioner, bank commissioner, commissioner of education, 3 members of the association, and 1 other member.
Michigan[2]	1915	State-wide	½ per cent per annum from salary of teachers, but not to exceed $5 per year for 5 years (board may increase to 1 per cent, but not to exceed $10); 1 per cent per annum, but not to exceed $10 for from 5 to 15 years (board may increase to 2 per cent, but not to exceed $20); 2 per cent per annum, but not to exceed $20 for over 15 years (board may increase to 3 per per cent, but not to exceed $30); gifts, donations, legacies, bequests, and income from investments. Supported by teachers.	One-half average annual salary for last 5 years' service; maximum, $500. If incapacitated, a sum bearing same ratio to $500 as time taught is to 30 years.	30; 15, including last 5 preceding retirement, must have been in the public schools of the State; 15, if incapacitated.	Amount equal to annuity for first year.	In case of resignation, one-half the amount contributed, without interest, is refunded.	Teachers' retirement fund board, consisting of 6 members: Superintendent of public instruction and 5 other members, at least 1 of which must be a woman. Members receive expenses, but no compensation.

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[1] Membership is compulsory for teachers who enter the service for the first time after the date of establishment; optional for teachers who have never served in the State prior to establishment. Boston teachers are excluded, except those in continuation and industrial schools.

[2] "Although a teachers' pension law was passed by the legislature, there is a question as to the constitutionality of this law. It seems quite probable that the whole thing will be thrown out." (Letter from State Supt. Fred L. Keeler, Lansing, Mich., Mar. 6, 1916.)

State pension systems for public-school teachers—Continued.

States.	Year established.	Extent.	How supported.	Amount of pension paid.	Years of service before pension begins.	Amount required paid in before retirement.	Provision for refunds.	Administration.
Minnesota.......	1915	State-wide. (Optional with teachers employed in State at time of passage of law.)	$5 per year for first 5 years from salary of teachers; $10 per year for second 5 years; $20 per year for next 10 years; $30 per year for next 5 years; teachers receiving $1,500 per year or more; 1½ per cent per year, but not to exceed $20 for first 10 years; 2 per cent per year, but not to exceed $40 for successive years. (Deductions not made for more than 25 years.) Donations, legacies, interest on investment, and tax of one-twentieth of 1 mill on all taxable property. Contributory system.	20 years, $350; 21 years, $380; 22 years, $410; 23 years, $440; 24 years, $470; 25 years, $500. If incapacitated, a sum bearing same ratio to $350 as time taught is to 20 years.	20; 15, including last 5 preceding retirement, must have been in public schools of the State; 15, if incapacitated.	....	In case of death or resignation, one-half the amount contributed is refunded.	Board of trustees of teachers' insurance and retirement fund, consisting of 5 members: State superintendent of education, State auditor, attorney general, and 2 members of association. Members shall receive $5 per day and all necessary expenses while attending meetings of the board.
Montana.........	1915	State-wide........	$1 per month from salary of teachers; income from investments, donations, gifts, bequests, and money appropriated by State. Contributory system.	$600; if incapacitated, a sum bearing same ratio to $600 as time taught is to 25 years.	25; 15, including last 10 must have been in service in the State; 15, if incapacitated.	Amount equal to $12 for each year's service up to and including 25 years.	No refund.........	Public-school teachers' retirement fund, consisting of 3 members: Superintendent of public instruction, treasurer, and attorney general. Members receive compensation as fixed by board.

Nebraska	1909	"All cities of the metropolitan class" (Omaha).	1 to 1½ per cent from salary of teachers; amount from general district fund equal to not less than one and one-half times salary assessment; gifts and bequests. Contributory system.	$500; if retired before rendering 35 years' service a sum bearing same ratio to $500 as time taught is to 35 years.	35; 25, if incapacitated; 40, compulsory retirement; at least 20 years must have been in service in the public schools of the school district.			Board of education.
Nevada	1915	State-wide. (Optional with teachers employed in State at time of passage of law.)	$9 per annum from salary of teachers; tax of 3 mills on each $100 worth of taxable property in State; donations, gifts, legacies, and bequests. Contributory system.	$500	30; 25, if incapacitated; 40, compulsory retirement; at least 20 years must have been in service in the public schools of the school district.			State board of education.
New Hampshire	1915	State-wide	Appropriation of $10,000 from State. Noncontributory system.	One-half average annual salary for last 5 years preceding retirement; if incapacitated, a sum bearing same ratio to full annuity as time taught is to 35 years in case of men or 30 years in case of women.	For women, 30; 15, including last 10 preceding retirement, must have been in service in public schools in the State; teachers must be at least 55 years of age. For men, 35; 15, including last 10 preceding retirement, must have been in service in public schools in the State; teachers must be at least 60 years of age.			State department of public instruction.
New Jersey	[1] 1896	do	2 per cent from salary of teachers for first 10 years; 2½ per cent for from 10 to 15 years; 3 per cent for over 15 years; no deduction to exceed $50 in any one year, nor $1,000 in all; gifts, donations, legacies, and bequests. Supported by teachers.	Minimum, $250; maximum, $650. If incapacitated, six-tenths of average annual salary for 5 years preceding retirement.	20, incapacitated	Amount equal to annuity for first year.	None	Board of trustees of teachers' retirement fund, consisting of 9 members: Commissioner of education, 3 persons not teachers and not eligible to membership of said fund, and 5 persons, members of said fund.

[1] New Jersey has a twofold system, one a disability pension maintained by the teachers; the other a service pension provided for by the State in its tax of railroads.

State pension systems for public-school teachers—Continued.

States.	Year established.	Extent.	How supported.	Amount of pension paid.	Years of service before pension begins.	Amount required paid in before retirement.	Provision for refunds.	Administration.
New Jersey	[1] 1907	State-wide	State railroad tax	One-half the average annual salary received for the last 5 years of service.	35; last 25 must have been in service in public schools of State; and teacher 70 years of age whose last 20 years of service have been in the public schools of the State; any teacher 75 years of age whose last 32 years of service have been in the public schools of the State; any teacher 70 years of age who has served not less than 35 years in the State, who heretofore or hereafter, shall be retired or discharged for physical disability.	None		State commissioner of education.
New York	1911	do.[2]	1 per cent from salary of teachers; similar amount from cities and districts. Contributory system.	One-half average annual salary for 5 years preceding retirement; maximum, $600, if incapacitated, a sum bearing same ratio to full annuity as time taught is to 25 years.	25; 15 must have been service in public schools in State; 15, if incapacitated; last 9 in service in public schools of the State. Must be 60 years of age.	Amount equal to one-half annuity for first year.	None	State teachers' retirement fund board, consisting of 5 members: Superintendent of schools, academic principal, teacher in elementary schools, and two others. Board must have at least 1 woman. Members are allowed expenses, but no compensation.
North Dakota	1914	do	1 per cent from salary of teachers for first 10 years, not to exceed $20; 2 per cent for succeeding 15 years, not to exceed $40; 10 cents for	One-fiftieth average annual salary for last 5 years multiplied by number of years of service.	25; 18, including last 5 preceding retirement, must have been in service in public schools in the State; 15, if incapacitated.	Amount equal to annuity for first year.	In case of retirement, one-half the amount contributed is refunded.	Board of trustees of teachers' insurance and retirement fund, consisting of 5 members: State superintendent of public instruction,

			each child of school age in the county; gifts and bequests. Contributory system.					State treasurer, and 3 teachers, 1 of whom shall be a woman. Members receive expenses of attending meetings, but no compensation.
Ohio	1897	....do	$2 per month from salary of teachers; all deductions from salaries of teachers on account of absence or tardiness; 1 to 2 per cent of gross receipts of board raised by taxation, gifts, etc. Contributory system.	$12.50 annually for each year taught; maximum, $450.	30; 15 must have been in service in public schools of district; 20, if incapacitated; 10 must have been in public schools of the district.	$20 per year for each year's service; maximum, $600.	In case of death or resignation, one-half the amount contributed is refunded; in case of dismissal, amount contributed is refunded.	Board of trustees of school-teachers' retirement fund, consisting of not less than 3 nor more than 7 members. Members receive no compensation.
Oregon	1911	Permissive for cities having "more than 10,000 children of school age." (Portland.)	Not less than $1 per month from salary of teachers during first 10 years, not less than $2 per month during second 10 years, not more than $3 per month during third 10 years; 3 per cent of county school tax; fines; gifts; bequests. Contributory system.	$300-$500	30; 20 if incapacitated.	$600	In case of resignation amount paid in excess of $300 is refunded. If dismissed, the entire amount contributed is refunded.	Board of trustees of the teachers' retirement fund association.
Pennsylvania	1907	All school districts that elect to come under provisions of law (Altoona, Harrisburg, Philadelphia, Reading, Wilkes-Barre, Williamsport, Scranton, Lancaster, Pittsburgh, Meadville, and Chester).	Dues from teachers;[3] appropriations from district funds; donations, bequests, etc., contributory system.[2]	(4)	(4)	(4)	(4)	Board of school directors of the district.

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[1] New Jersey has a twofold system, one a disability pension maintained by the teachers; the other a service pension provided by the State. (See Appendix C.)

[2] Not including New York City, Buffalo, Syracuse, Rochester, Troy, Albany, Cohoes, Mount Vernon, and Westchester County, which maintain separate systems.

[3] The law provides that "No employee shall be required to contribute any part of his salary to the retirement fund, unless the same is provided for in the agreement by which he is engaged."

[4] Each district has its own regulations.

State pension systems for public-school teachers—Continued.

States.	Year established.	Extent.	How supported.	Amount of pension paid.	Years of service before pension begins.	Amount required paid in before retirement.	Provision for refunds.	Administration.
Rhode Island....	1907	State-wide........	Noncontributory system.	One-half average annual salary for last 5 years' service; maximum, $500; if incapacitated, a sum bearing same ratio to $500 as time taught is to 35 years.	35; 25, including last 15 preceding retirement, must have been in service in the public schools of the State; 20, if incapacitated.	....	....	State board of education.
Tennessee........	1915	Chattanooga only.	Appropriation from city funds. Noncontributory system.	Two-thirds amount teacher received last year of employment in the public schools of the city.	30; must be at least 60 years of age.	....	....	Board of commissioners.
Utah............	1913	State-wide........	1 per cent, but not to exceed $12 annually from salary of teachers; deductions from salary of teachers on account of absence, not to exceed 5 days in any one year; gifts and bequests. Supported by teachers.	One-half average annual salary for 5 years preceding retirement; maximum, $600; if less than 30 years of service and more than 20 years, a sum bearing same ratio to $600 as time taught is to 30 years.	30; 10 must have been in schools of the State; must be at least 60 years of age. 20 to 30 for temporary retirement for incapacity; 10 must have been in schools of the State.	Amount equal to 1 per cent of entire salary received for years of service claimed, salary basis not to exceed $1,200 annually; provided that delinquent dues may be deducted from annuity, deduction distributed over not more than 3 years.	In case of death, amount contributed is refunded.	Public-school teachers' retirement commission, consisting of 15 members: State auditor, treasurer, superintendent, attorney general, and 11 members of association.
Vermont.........	1913	.....do............	Contributions from teachers; appropriations from legislature; income from investments, gifts, and bequests. Contributory system.	One-half average annual salary for last 5 years preceding retirement; maximum, $500; if incapacitated, amount determined by board.	25....................	....	....	Vermont State teachers' retirement fund board, consisting of 5 members: Governor, superintendent of education, treasurer, president of board, and 1 mem-

								ber of association. Members receive expenses, but no compensation.
Virginia	1908	do	1 per cent from salary of teachers; appropriation from State of $10,000 annually; gifts and bequests. Contributory system.	One-eighth average annual salary for last 5 years preceding retirement.	30; men must be 58 years of age, women, 50; if incapacitated, 20.	30 per cent of average annual salary for last 5 years of service less the amount already contributed to the pension fund.	In case of dismissal, amount contributed plus interest at 6 per cent is refunded.	Department of public instruction.
West Virginia	1915	Wheeling only	$20 annually from salary of teachers; appropriation from school funds; donations, gifts, and legacies. Contributory system.	$360	30; 10 must have been in Wheeling schools. Compulsory at 65 years of age.	$600	In case of voluntary retirement, one-half the amount paid in is refunded; if compulsory retirement, entire amount contributed is refunded.	Four members of board of education and 3 teachers.
Wisconsin	1911	State-wide, "except cities of the first class" (Milwaukee).	1 per cent from salary of teachers, not to exceed $15 for each of first 10 years; 2 per cent, but not to exceed $30 for each of the succeeding 15 years; seven-tenths of mill tax levied for common schools; 10 cents for each person of school age in the State; donations and legacies. Contributory system.	$12.50 for each year of service; maximum, $450.	25; 18 must have been in service in the public schools of the State; 18, if incapacitated.	Amount equal to annuity for first year.	In case of resignation, one-half the amount contributed is refunded.	Board of trustees of teachers' insurance and retirement fund, consisting of 5 members: State superintendent of public instruction, State treasurer, and 3 members of association, 1 of whom must be a woman. Members, except secretary, receive expenses, but no compensation; secretary may receive salary not to exceed $1,800 per annum.

ADDITIONAL NOTES ON THE TEACHERS' PENSION SITUATION IN THE VARIOUS STATES.

[Compiled from special reports by State officials.]

Arizona.—What we have is not a pension law in the true sense of the term; it is more of a direct payment out of the State school fund to a few of our worthy pioneer teachers in this State.

C. O. Case, *State Superintendent of Public Instruction.*

Arkansas.—There is no law in this State authorizing a pension or retirement system for school-teachers, and no authority in the law whereby such system could be placed in operation in any of the cities or counties of the State.

Geo. B. Cook, *State Superintendent of Public Instruction.*

Florida.—There is no law whatever in Florida granting pensions to teachers, nor do I know of any county or city in the State that grants such pensions. Two or three years ago a bill providing for teachers' pensions was introduced in our State legislature and received considerable support but did not pass.

W. N. Sheats, *State Superintendent of Public Instruction.*

Georgia.—There are no laws of State-wide force concerning this subject. Any local system, however, has the right to pension teachers if desired. In two or three places movements have been inaugurated for this purpose.

M. L. Brittain, *State Superintendent of Schools.*

Idaho.—We have no pension system for teachers in this State. This is to be attributed to the State's youth, and to the fact that the teachers of our State are young and have not felt the necessity of the pension system. Of course, as the State develops and our teachers serve long tenure in schools in this State, this question will undoubtedly arise. A large number of our teaching force are transient—with us two or three years, perhaps a little longer, and then they move on to the farther western States, to Alaska, and the Hawaiian Islands. From this it is evident that our teaching body is not a permanent one by any means. Consequently, the question of pensions has not become a problem with us at all.

Bernice McCoy, *Superintendent of Public Instruction.*

Illinois.—The Illinois State teachers' pension and retirement fund was established by the forty-ninth general assembly and the law went into effect on July 1, 1915. It is still rather early to properly judge the sentiment in regard to change, extension, or alteration of the existing plan. As yet our efforts have been largely occupied in putting into operation the law and developing the system of administration.

D. F. Nickols, *Secretary Teachers' Pension and Retirement Fund.*

Iowa.—We do not have such a law [relating to teachers' pensions] in this State. An effort has been made at each session of the legislature for the past four years, but so far we have been unsuccessful.

A. M. Deyoe, *Superintendent of Public Instruction.*

Maine.—The law provides that pensions shall be granted to teachers on three different bases: Those who have taught between 25 and 30 years receive $150; those who have taught between 30 and 35 years receive $200; and those who have taught more than 35 years receive $250. In addition to these there is also provision for the payment of one-half these amounts to teachers who otherwise meet the requirements of the law, but whose service ended prior to the school year next preceding the 30th day of September, 1913.

The form of administration is simple. Upon presentation of proper proof of age and service a certificate is granted to the applicant, and thereafter an application blank is filed by the pensioner at the end of each three-month period. Upon receipt of this application the State superintendent of schools certifies to the governor and council the amount due each pensioner and payment is made directly by the treasurer of State.

PAYSON SMITH, *State Superintendent of Public Schools.*

Massachusetts.—Most of the teachers seem to be entirely satisfied with the system. There is a feeling among some of the teachers, however, that a disability feature should be incorporated in the law. There are two disability bills before the legislature at the present time and also a bill which provides that the interest allowed on the contributions of the members be changed from 3 per cent to the amount actually earned.

CLAYTON L. LENT, *Secretary Teachers' Retirement Board.*

Minnesota.—This is the first year of the operation of this law. It is giving quite general satisfaction. The young teachers object to the compulsory feature, and teachers who have served for many years, but who quit before the law was passed, complain because of ineligibility to membership. The only way such teachers can qualify is by returning to the service and teaching for five years in the State. It is too early to make any prediction as to the successful operation of the law as it stands, but thus far its provisions seem to meet with general satisfaction.

E. T. CRITCHETT, *Secretary Teachers' Insurance and Retirement Fund.*

Missouri.—We have no law in Missouri on the subject of teachers' pensions. St. Louis has had a system of pensions for some years, but it is a private arrangement. Some years ago a bill was introduced and a hard fight made to pass a law providing for a retiring fund for teachers, but it failed of approval in both house and senate.

HOWARD A. GASS, *State Superintendent of Education.*

Montana.—The law has not yet been in force long enough to make it possible to give any report in regard to the operation of the law. It will not be possible for any one to be retired under the law for at least three years yet.

H. H. SWAIN, *Secretary Retirement Salary Fund Board.*

New Hampshire.—One point in the law needs to be amended. Section 8, the last paragraph, states: "Preference being given to those certified as entitled in the order of their age." Every quarter there is a change made in the list of pensioners, inasmuch as the $10,000 is already more than taken up. This makes it necessary to drop off the youngest on our list if pensioners coming in since the last payment are older. This is a pretty trying situation, and in some way will have to be amended. We have on our list to-day 65 pensioners and 15 of these are under the age now when a pension can be allowed.

HARRIET L. HUNTRESS, *Deputy State Superintendent.*

New Mexico.—This State has no arrangements whatever concerning pensions or retirement plans. It is just lately that an interest has been awakened in this matter, and it is possible that there may be some legislation looking toward the establishment of pensions for teachers in the not distant future.

FILADELFO BACA, *Assistant State Superintendent of Education.*

New York.—The teachers' retirement plan in this State is more than meeting the expectation, I think, of its most ardent advocates. One of the chief factors, if not the most important one, in such pension schemes is the administration of the fund, necessitating conservative, watchful care on the part of the board in considering persons for the annuitant list. Generally I believe the plan is meeting not only the needs, but is having the cheerful cooperation of the teachers, superintendents, and other school officials of the State.

E. G. LANTMAN, *Secretary Teachers' Retirement Fund Board.*

North Carolina.—This State does not have a pension system to take care of its teachers. The city of Raleigh has adopted a pension system, however.

C. E. MCINTOSH, *Chief Clerk, Department of Education.*

Oklahoma.—We have no legislation providing for teachers' pensions in Oklahoma. I do not believe a law providing for the pensioning of teachers has ever been proposed by the legislature in this State. We know of no cities in Oklahoma in which pension or retirement plans are in operation.

R. H. Wilson, *State Superintendent of Public Instruction.*

Pennsylvania.—Under our constitution pensions can only be paid for service in the Army or Navy of the State or the United States. For this reason we have not been able to pass a general [teachers'] pension law for the entire State.

Nathan C. Schaeffer, *State Superintendent of Public Instruction.*

South Dakota.—Thus far South Dakota has made no provision for teachers' pensions. The matter has been discussed in the State legislature at different times, but no act has been passed making any provision whatever for teachers who have devoted the best part of their lives to the State's service. We have, therefore, no pension system of any kind operating under State management.

C. H. Lugg, *State Superintendent of Public Instruction.*

Texas.—Texas has never enacted any laws relative to teachers' pensions or retirement funds. In so far as I know there are no school communities in this State that have in operation any such plan.

W. F. Doughty, *State Superintendent of Education.*

Utah.—While the law under which the teachers' retirement association was organized was passed in 1913, the actual organizing of the association did not take place until 1915. It is not possible, so soon after the organization, to say just how the law will be received.

E. G. Gowans, *State Superintendent of Public Instruction.*

Virginia.—The investment of the permanent pension fund is placed in the hands of the State board of education. All money collected is turned over to the second auditor of Virginia and is deposited by him with the State treasurer. Bonds belonging to the permanent fund are deposited with the second auditor for safekeeping. All money is disbursed by warrant, drawn on second auditor and signed by the president and secretary of the State board of education.

Our system has proved quite satisfactory and has been of great benefit to those teachers who have been forced to retire from active service.

R. C. Stearnes, *State Superintendent of Public Instruction.*

Washington.—Our pension bill was voted down at the last session of the legislature; so that we have no law at all on school pensions. There is no city in our State that has a pension or retirement plan. We will continue our effort until we secure this legislation.

Mrs. Josephine C. Preston, *State Superintendent of Public Instruction.*

Wisconsin.—The law seems to be giving quite general satisfaction in the State and during the recent legislature there was a strong sentiment for retaining the law and strengthening it in such ways as were found necessary.

R. E. Loveland, *Secretary Teachers' Insurance and Retirement Fund.*

Wyoming.—Wyoming has no system of teachers' pensions in force either as a State institution or established locally in any county or community. There has been some agitation for the past few years looking toward the passage of some legislation which would create such a retirement fund, but as yet nothing definite has been accomplished.

Edith K. O. Clark, *State Superintendent of Public Instruction.*

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APPENDIX A.

TYPICAL PENSION AND RETIREMENT LAWS.

MASSACHUSETTS [1] (1913).

SECTION 1. The following words and phrases as used in this act, unless a different meaning is plainly required by the context, shall have the following meanings:

(1) "Retirement system" shall mean the arrangement provided in this act for payment of annuities and pensions to teachers.

(2) "Annuities" shall mean payments for life derived from contributions from teachers.

(3) "Pensions" shall mean payments for life derived from contributions from the Commonwealth.

(4) "Teacher" shall mean any teacher, principal, supervisor, or superintendent employed by a school committee, or board of trustees, in a public day school within the Commonwealth.

(5) "Public school" shall mean any day school conducted within this Commonwealth under the order and superintendence of a duly elected school committee, and also any day school conducted under the provisions of chapter 471 of the acts of the year 1911.

(6) "Regular interest" shall mean interest at 3 per cent per annum, compounded annually on the last day of December of each year.

(7) "Retirement board" shall mean the teachers' retirement board, as provided in section 4 of this act.

(8) "Retirement association" shall mean the teachers' retirement association, as provided in section 3 of this act.

(9) "Expense fund" shall mean the fund provided for in paragraph numbered 1 in section 5 of this act.

(10) "Annuity fund" shall mean the fund provided for in paragraph numbered 2 in section 5 of this act.

(11) "Pension fund" shall mean the fund provided for in paragraph numbered 3 in section 5 of this act.

(12) "School year" shall mean the 12 months from the 1st day of July of any year to the 30th of June next succeeding.

(13) "Assessment" shall mean the annual payments to the annuity fund by members of the association.

ESTABLISHMENT OF A TEACHERS' RETIREMENT SYSTEM.

SEC. 2. A teachers' retirement system shall be established on the 1st day of July 1914.

TEACHERS' RETIREMENT ASSOCIATION.

SEC. 3. A teachers' retirement association shall be organized among the teachers in the public schools as follows:

(1) All teachers, except those specified in paragraph (3) of this section, who enter the service of the public schools for the first time on or after July 1, 1914, shall become thereby members of the association.

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[1] Contributory plan.

(2) All teachers, except those specified in paragraph (3) of this section, who shall have entered the service of the public schools before June 30, 1914, may, at any time between July 1, 1914, and September 30, 1914, upon application in writing to the commissioner of education, become members of the retirement association. Any teacher failing to do so may thereafter become a member of the retirement association by paying an amount equal to the total assessments, together with regular interest thereon, that he would have paid if he had joined the retirement association on September 30, 1914.

(3) Teachers in the service of the public schools of the city of Boston shall not be included as members of the retirement association.

STATE TEACHERS' RETIREMENT BOARD.

Sec. 4. (1) The management of the retirement system is hereby vested in the teachers' retirement board, consisting of seven members—the insurance commissioner for the Commonwealth, the bank commissioner for the Commonwealth, the commissioner of education for the Commonwealth, three members of the retirement association, and one other person. Upon organization of the retirement association the members thereof shall elect from among their number, in a manner to be approved by the insurance commissioner, the bank commissioner, and the commissioner of education, three persons to serve upon the retirement board, one member to serve for one year, one for two years, and one for three years; and thereafter the members of the retirement association shall elect annually from among their number, in a manner to be approved by the retirement board, one person to serve upon the retirement board for the term of three years. The seventh member of the retirement board shall be elected annually by the other six to serve for the term of one year. On a vacancy occurring on the board, a successor of such person whose place has become vacant shall be chosen in the same manner as his predecessor to serve until the next annual election. Until the organization of the retirement association and the election of three representatives therefrom, the insurance commissioner, the bank commissioner, and the commissioner of education shall be empowered to perform the duties of the retirement board.

(2) The members of the retirement board shall serve without compensation, but they shall be reimbursed from the expense fund of the retirement association for any expenditures or loss of salary or wages which they may incur through serving on the board. All claims for reimbursement on this account shall be subject to the approval of the governor and council.

(3) The retirement board shall have power to make by-laws and regulations not inconsistent with the provisions of this act, and to employ a secretary who shall give a bond in such amount as the board shall approve, and clerical and other assistance as may be necessary. The salaries shall be fixed by the board, with the approval of the governor and council.

(4) The retirement board shall provide for the payment of retirement allowances and such other expenditures as are required by the provisions of this act.

(5) The retirement board shall adopt for the retirement system one or more mortality tables, and shall determine what rates of interest shall be established in connection with such tables, and may later modify such tables or prescribe other tables to represent more accurately the expense of the retirement system, or may change such rates of interest, and may determine the application of the changes made.

(6) The retirement board shall perform such other functions as are required for the execution of the provisions of this act.

CREATION OF FUNDS.

SEC. 5. The funds of the retirement system shall consist of an expense fund, an annuity fund, and a pension fund.

(1) The expense fund shall consist of such amounts as shall be appropriated by the general court from year to year on estimates submitted by the retirement board to defray the expense of the administration of this act, exclusive of the payment of retirement allowances.

(2) The annuity fund shall consist of assessments paid by members of the retirement association and interest derived from investments of the annuity fund. Each member of the retirement association shall pay into the annuity fund, by deduction from his salary in the manner provided in section 9, paragraph 5, of this act, such assessments upon his salary as may be determined by the retirement board. The rate of assessment shall be established by the retirement board on the first day of July of each year after a prior notice of at least three months, and shall at any given time be uniform for all members of the retirement association, and shall not be less than 3 per cent nor more than 7 per cent of the members' salary: *Provided, however*, That when the total sum of assessments on the salary of any member at the rate established by the retirement board would amount to more than $100 or less than $35 for any school year, such member shall in lieu of assessments at the regular rate be assessed $100 a year or $35 a year as the case may be, payable in equal installments to be assessed for the number of months during which the schools of the community in which such member is employed are commonly in session. Any member of the retirement association who shall for 30 years have paid regular assessments to the annuity fund as provided herein, shall be exempt from further assessments; but such member may thereafter, if he so elects, continue to pay his assessments to the fund. No member so electing shall pay further assessments after the total sum of assessments paid by him shall at any time have amounted, with regular interest, to a sum sufficient to purchase an annuity of $500 at age 60; and interest thereafter accruing shall be paid to the member at the time of his retirement.

(3) The pension fund shall consist of such amounts as shall be appropriated by the general court from time to time on estimates submitted by the retirement board for the purpose of paying the pensions provided for in this act.

PAYMENT OF RETIREMENT ALLOWANCES.

SEC. 6. (1) Any member of the retirement association may retire from service in the public schools on attaining the age of 60 years, or, at any time thereafter, if incapable of rendering satisfactory service as a teacher, may, with the approval of the retirement board, be retired by the employing school committee.

(2) Any member of the retirement association on attaining the age of 70 years shall be retired from service in the public schools.

(3) A member of the retirement association after his retirement under the provisions of paragraphs numbered (1) or (2) of this section, shall be entitled to receive from the annuity fund, as he shall elect at the time of his retirement, on the basis of tables adopted by the retirement board—(*a*) An annuity payable in quarterly payments, to which the sum of his assessments under section 5, paragraph (2), with regular interest thereon, shall entitle him; or (*b*) an annuity of less amount, as determined by the retirement board for the annuitants electing such option, payable in quarterly payments, with the provision that if the annuitant dies before receiving payments equal to the sum of his assessments under section 5, paragraph (2), with regular interest, at the time of his retirement, the difference between the total amount of said payments and the amount of his contributions with regular interest shall be paid to his legal representatives.

(4) Any member of the retirement association receiving payments of an annuity as provided in paragraph numbered (3) of this section shall, if not rendered ineligible therefor by the provisions of section 12 of this act, receive with each quarterly payment of his annuity an equal amount to be paid from the pension fund as directed by the retirement board.

(5) Any teacher who shall have become a member of the retirement association under the provisions of paragraph numbered (2) of section 3, and who shall have served 15 years or more in the public schools of the Commonwealth, not less than five of which shall immediately precede retirement, shall, on retiring as provided in paragraphs (1) and (2) of this section, be entitled to receive a retirement allowance as follows: (*a*) Such annuity and pension as may be due under the provisions of paragraphs numbered (3) and (4) of this section; (*b*) an additional pension to such an amount that the sum of this additional pension and the pension provided in paragraph (4) of this section shall equal the pension to which he would have been entitled under the provisions of this act if he had paid 30 assessments on his average yearly wage for the 15 years preceding his retirement and at the rate in effect at the time of his retirement: *Provided*, (1) That if his term of service in the Commonwealth shall have been over 30 years the thirty assessments shall be reckoned as having begun at the time of his entering service and as drawing regular interest until the time of retirement; *And further provided*, (2) that if the sum of such additional pension together with the annuity and pension provided for by paragraphs numbered (3) and (4) of this section is less than $300 in any one year, an additional sum sufficient to make an annual retirement allowance of $300 shall be paid from the pension fund.

(6) If at any time it is impossible or impracticable to consult the original records as to wages received by a member during any period, the retirement board shall determine the pension to be paid under paragraph numbered (5) (*b*) of this section in accordance with the evidence they may be able to obtain.

WITHDRAWAL AND REINSTATEMENT.

SEC. 7. (1) Any member of the retirement association withdrawing from service in the public schools before becoming eligible to retirement shall be entitled to receive from the annuity fund all amounts contributed as assessments, together with regular interest thereon, in the manner hereinafter provided.

(2) If such withdrawal shall take place before 10 annual assessments have been paid, the total amount to which such member is entitled as determined by the retirement board under the provisions of this act shall be paid to him in four annual installments.

(3) If such withdrawal shall take place after 10 annual assessments have been paid the amount so refunded shall be in the form of such annuity for life based on the contributions of such member, together with regular interest thereon, as may be determined by the retirement board according to its annuity tables, or in four annua installments, as such members may elect.

(4) If a member of the association withdrawing and receiving payments in accordance with paragraphs numbered (2) and (3) of this section, shall die before the amount of such payments equals the amount of his contributions to the annuity fund with regular interest, the difference between the amount of such payments and the amount of his contributions with regular interest shall be paid to his legal representatives.

(5) Any member of the retirement association who shall have withdrawn from service in the public schools shall, on being reemployed in the public schools, be reinstated in the retirement association in accordance with such plans for reinstatement as the retirement board shall adopt.

(6) If a member of the retirement association shall die before retirement, the full amount of his contributions to the annuity fund with regular interest to the day of his death shall be paid to his legal representatives.

TAXATION, ATTACHMENTS, AND ASSIGNMENTS.

SEC. 8. That portion of the salary or wages of a member deducted or to be deducted under this act, the right of a member to an annuity or pension, and all his rights in the funds of the retirement system shall be exempt from taxation, and from the operation of any laws relating to bankruptcy or insolvency, and shall not be attached or taken upon execution or other process of any court. No assignment of any right in or to said funds shall be valid. The funds of the retirement system, so far as invested in personal property, shall be exempt from taxation.

DUTIES OF THE SCHOOL COMMITTEE.

SEC. 9. (1) The school committee of each town and city in the Commonwealth shall, before employing in any teaching position any person to whom this act may apply, notify such person of his duties and obligations under this act as a condition of his employment.

(2) On or before October 1 of each year the school committee of each town and city in the Commonwealth shall cretify to the retirement board the names of all teachers to whom this act shall apply.

(3) The school committee of each town and city in the Commonwealth shall, on the first day of each calendar month, notify the retirement board of the employment of new teachers, removals, withdrawals, changes in salary of teachers, that shall have occurred during the month preceding.

(4) Under the direction of the retirement board the school committee of each town or city in the Commonwealth shall furnish such other information as the board may require relevant to the discharge of the duties of the board.

(5) The school committee of each town and city in the Commonwealth shall, as directed by the retirement board, deduct from the amount of the salary due each teacher employed in the public schools of such city or town such amounts as are due as contributions to the annuity fund as prescribed in this act, shall send to the treasurer of said town or city a statement as voucher for such deductions, and shall send a duplicate statement to the secretary of the retirement board.

(6) The school committee of each town and city in the Commonwealth shall keep such records as the retirement board may require.

DUTIES OF BOARDS OF TRUSTEES.

SEC. 10. In administering this act for the benefit of teachers in schools conducted in accordance with chapter 471 of the acts of the year 1911, the boards of trustees of said schools are hereby authorized and required to perform all the duties prescribed for school committees under this act.

CUSTODY AND INVESTMENT OF FUNDS.

SEC. 11. (1) The treasurer of each town or city in the Commonwealth on receipt from the school committee or board of trustees of the voucher for deductions from the teachers' salaries provided for in section 9 shall transmit, monthly, the amounts specified in such voucher to the secretary of the retirement board.

(2) The secretary of the retirement board shall monthly pay to the treasurer of the Commonwealth all sums collected by him under the provisions of paragraph (1).

(3) All funds of the retirement system shall be in custody and charge of the treasurer of the Commonwealth, and the treasurer shall invest such funds as are not required for current disbursements in accordance with the laws of the Commonwealth governing the investment of sinking funds. He may, whenever he sells securities, deliver the securities so sold upon receiving the proceeds thereof, and may execute any or all documents necessary to transfer the title thereto.

(4) The treasurer of the Commonwealth shall make such payments to members of the retirement association from the annuity fund and pension fund as the retirement board shall order to be paid in accordance with sections 6 and 7 of this act.

(5) On or before the third Wednesday in January the treasurer of the Commonwealth shall file with the insurance commissioner for the Commonwealth and with the secretary of the retirement board a sworn statement exhibiting the financial condition of the retirement system on the 31st day of the preceding December and its financial transactions for the year ending at such date. Such statement shall be in the form prescribed by the retirement board and approved by the insurance commissioner.

MEMBERSHIP IN OTHER RETIREMENT ASSOCIATIONS.

SEC. 12. (1) No person required to become a member of the association under the provisions of paragraph (1) of section 3 of this act shall be entitled to participate in the benefits of any other teachers' retirement system, supported in whole or in part by funds raised by taxation, or to a pension under the provisions of chapter 498 of the acts of the year 1908, or chapter 589 of the acts of the year 1908, as amended by chapter 617 of the acts of the year 1910.

(2) No member of the retirement association shall be eligible to receive any pension as described in section 6 of this act who is at the time in receipt of a pension paid from funds raised in whole or in part from taxation under the provisions of chapter 498 of the acts of the year 1908, or chapter 589 of the acts of the year 1908, as amended by chapter 617 of the acts of the year 1910, or of any other act providing pensions for teachers, providing that this paragraph shall not be construed as applying to the Boston Teachers' Retirement Fund Association.

REIMBURSEMENT OF CITIES AND TOWNS.

SEC. 13. (1) Whenever, after the 1st day of July, 1914, a town or city retires a teacher who is not eligible to a pension under the provisions of section 6, paragraph (4) of this act, and pays to such teacher a pension in accordance with chapter 498 of the acts of the year 1908, or chapter 589 of the acts of the year 1908, as amended by chapter 617 of the acts of the year 1910, and the school committee of said town or city certifies under oath to the retirement board to the amount of said pension, said town or city shall be reimbursed therefor annually by the Commonwealth: *Provided*, That no such reimbursement shall be in excess of the amount, as determined by the retirement board, to which said teacher would have been entitled as a pensioner, had be become a member of the retirement association under the provisions of section 3, paragraph (2) of this act.

(2) On or before the first Wednesday of January of each year the retirement board shall present to the general court a statement of the amount expended previous to the preceding 1st day of July by cities and towns in the payment of pensions under the provisions of the preceding paragraph, for which such cities and towns should receive reimbursement. On the basis of such a statement the general court may make an appropriation for the reimbursement of such cities and towns up to such 1st day of July.

JURISDICTION OF COURT.

SEC. 14. The superior court shall have jurisdiction in equity upon petition of the insurance commissioner or of any interested party to compel the observance and restrain the violation of this act and of the rules and regulations established by the retirement board hereunder.

REFERENDUM AND REPEAL.

Sec. 15. Upon the petition of not less than 5 per cent of the legal voters of any city or town that has adopted chapter 498 of the acts of the year 1908, this question shall be submitted, in case of a city, to the voters of such city at the next city election, and, in case of a town, to the voters of such town at the next annual town meeting, and the vote shall be in answer to the question to be placed upon the ballot: "Shall an act passed by the general court in the year 1908, entitled 'An act to authorize cities and towns to establish pension funds for teachers in the public schools,' be repealed?" and if a majority of the voters thereon at such election or meeting shall vote in the affirmative, said act shall be repealed in such city or town.

Sec. 16. So much of chapter 498 of the acts of the year 1908 as authorizes its submission to the voters of a city or town for acceptance after the passage of this act is hereby repealed.

Sec. 17. This act shall take effect upon its passage.

MINNESOTA [1] (1915).

Section 1. The word teacher as used in this act shall include any teacher, supervisor, principal, superintendent, or certified librarian employed in any educational or administrative capacity in the public schools of Minnesota, or in any educational, correctional, or charitable institution supported wholly or in part by this State, excepting those employed in the University of Minnesota. The term "Member of the fund association," wherever used in this act, shall mean and include every teacher (as herein defined), who shall contribute to the Teachers' Insurance and Retirement Fund by the payment of the dues hereinafter provided by this act.

Sec. 2. For the purpose of better compensating the teachers in the public schools and making the occupation of "teacher" in this State more attractive to qualified persons, there is hereby established for the State a fund to be known as the "Teachers' insurance and retirement fund," for the benefit of teachers who have served not less than 20 years except as hereinafter provided. Said fund shall be secured from the following sources:

First. From assessments on the members of the fund association according to the following schedule: For the first five years of teaching service, $5 per year; for the second five years, $10 per year; for the next ten years, $20 per year; for the next five years, $30 per year. *Provided,* That when the regular annual salary as teacher of any member of the fund association shall have reached $1,500 or more said member shall be assessed upon a percentage basis as follows: One and one-half per centum per annum, but not more than $20 per year, for the first ten years of service as a teacher; and 2 per centum per annum, but not more than $40 per year, for each successive year of service as teacher: *Provided,* That in no case shall the annual assessments based on a percentage rate be less for any year than the flat rate assessments for a single year of the corresponding period, said assessment period to cover not more than 25 years in all, after which all assessments shall cease.

Second. From all money and property received as donations, gifts, legacies, devises, bequests, or otherwise for the benefit of said teachers' insurance and retirement fund.

Third. From all interest arising from investments of the money belonging to said fund.

Fourth. From a tax of one-twentieth of 1 mill, which is hereby levied annually on all the taxable property located in that part of the State subject to the provisions of this act, after the valuation of said property has been equalized by the State; said tax to be collected by the same officials and at the same time and in the same manner as other taxes in said State, all moneys received from the tax hereby levied to be paid into and become a part of the said teachers' insurance and retirement fund.

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[1] Contributory plan.

The assessments upon the members of the fund association hereinbefore referred to shall be paid in as many equal monthly payments as there are months in the school year for which the teachers' salaries are paid, and such assessments shall be deducted by the several boards of education or managing bodies from the salaries of teachers as hereinafter provided.

Credit on period of service may be allowed to applicants for membership for periods of employment prior to the taking effect of this law; but in such case the applicant must pay arrearages at the above rates for the period of service for which credit is so allowed under rules to be adopted by the board of trustees, hereinafter referred to, and the rules adopted by said board shall be uniform in their operation as to all persons affected. In case any teacher has retired for any cause before he or she has paid in fees a sum equal to the full amount of fees required for the annuity applied for and to which such teacher is entitled by period of service, there shall be deducted from the first year's annuity to such teacher such sum as will make the total amount paid by said teacher equal to the full amount of said fees.

Sec. 3. It is hereby made the duty of each board of education or managing body required by law to draw the warrants or orders for payement of salaries of teachers to deduct and withhold from each month's salary due to such teacher the amount which such teacher is required to pay into said insurance and retirement fund as herein specified, and at the time of such deduction a statement showing the amount of such deduction shall be furnished to such teacher.

Such board of education or other managing body shall, between the 1st and 15th of January and between the 1st and 15th of July of each year, forward to the treasurer of the county in which such school district is situated a statement, verified by the secretary or clerk thereof, showing the amount of money so retained from each teacher in accordance with the provisions of this act, and with said statement shall transmit the entire amount so retained to the treasurer of said county; and in case any school district is situated in more than one county such report and remittance shall be sent to the senior county. Said board of education or other managing body shall also, on or before the 15th day of July of each year, transmit to the county superintendent a statement showing the name of each teacher, the number of months of school taught during the year for which the statement is made, the number of months which constitute a school year in said district or institution, and the total amount withheld from the salary of each teacher for the school year preceding, showing also the number of years each of said teachers has taught in the public schools of that district. If no teacher in such public school or other educational institution comes under the provisions of this act said report shall state such fact and thall be verified by the oath of the clerk or secretary. The failure of any member of a school board, board of education, or other body having the management of any educational institution to perform any of the duties herein required of them shall be a misdemeanor.

Each county superintendent shall, each year on or before the 1st day of September, report under oath to the board of trustees of the State teachers' insurance and retirement fund, giving an itemized summary of the statements received by him from the school boards and other educational managing bodies, showing the total amount withheld from the salaries of teachers in said county for the benefit of said insurance and retirement fund. Between the 15th and 30th day of January and between the 15th and 30th day of July of each year the county treasurer of each county shall transmit to the State treasurer all moneys received from the boards of education or other managing bodies of school districts or other educational institutions, in accordance with the provisions of this act, and shall certify under oath to the correctness of the amount so received and transmitted. The State treasurer shall credit all moneys received under the provisions of this act to the State teachers' insurance and retirement fund: *Provided however*, That the State treasurer, the several county treasurers, and the treasurers of the various school districts shall be officially liable for the receipt, handling, and disbursement of all moneys coming into their hands belonging to the said State teachers' insurance and retirement fund, and the securities on the official bonds of each of said treasurers shall be liable for such money the same as for all other moneys belonging to the school funds of this State.

SEC. 4. The management of the fund shall be vested in a board of five trustees, which shall be known as the "board of trustees of the teachers' insurance and retirement fund." Said board shall be composed of the following persons: The State superintendent of education, the State auditor, the attorney general, and two members of the fund association, who shall be elected by the members of the fund association at the time and place of the annual meeting of the Minnesota educational association and shall serve for the term of two years, beginning on the first Monday of January next succeeding their election, except in the case of the first elective members, who shall assume office immediately after their election and serve—one for one year and one for two years—from the first Monday of January next succeeding their election and until their successors are elected. Vacancies in the elective membership of the board shall be filled by appointment by said board of trustees, the appointee to serve until the next meeting of the fund association, when the members of said fund association shall elect a trustee or trustees to serve for the unexpired term or terms. No person shall be appointed by the board of trustees or elected by the members of the fund association as a member of the board of trustees who is not a member of the fund association at the time of the appointment or election.

In the interval between the passage of this act and the time when the first elective members of the board of trustees shall assume office, as hereinbefore provided, the superintendent of education, the State auditor and the attorney general shall constitute a temporary board of trustees of the teachers' insurance and retirement fund and shall be empowered to peform the duties of said board.

Said board of trustees shall have power to frame by-laws for its own government, not inconsistent with the laws of the State, and to modify them at pleasure; to elect one of its own members as president of the board and to provide and enforce all rules and regulations necessary to carry into effect the provisions of this act; to elect a secretary, who shall serve during the pleasure of the board, and to fix the salary and prescribe the duties of the office of secretary; to authorize the issuance of warrants by the State auditor on the State treasurer for the payment out of said fund of all annuities or benefits payable under the provisions of this act, of the salary of the secretary, and other necessary expenses.

All applications for annuities or benefits under this act must be made to said board. In passing upon said applications said board may summon witnesses and, in the case of applications founded on disability, may require any applicant to submit to a medical examination at his or her own expense and, in the case of all applicants, may conduct any reasonable investigation to determine the justice of any claim submitted. It may sue or be sued in the name of the board of trustees of the teachers' insurance and retirement fund, and in all actions brought by or against it said board shall be represented by the attorney general. Said board shall constitute a part of the State government, but in any action brought against it by any person claiming to be a beneficiary of said teachers' insurance and retirement fund it shall not claim immunity from suit.

It shall be the duty of said board to invest as much of the funds in its hands as shall not be needed for current purposes. Such investments shall be made in the same class of securities as those in which the school funds of the State are required to be invested, and all securities taken upon such investments shall be deposited with the

State treasurer; but in case of necessity such securities may be sold in order to raise money for current purposes. No such sale shall be made except by the unanimous vote of said board, such vote to be entered upon the records of its proceedings. All interest obtained from such investments shall be placed in the general fund, to be used for current purposes. A suitable office in the capitol, with suitable furniture and necessary office supplies, shall be provided by the proper State officer for the use of said board of trustees.

SEC. 5. The board of trustees shall meet annually at the office of the secretary, in the State capitol, on the second Saturday in September, at an hour to be fixed by the board. Speical meetings may be held at any time on the call of the president of said board or by any three members thereof. The State auditor, State superintendent of education, and attorney general shall serve as members of said board without additional compensation, but the elective members of said board shall be entitled to compensation at the rate of $5 per day and necessary expenses while attending all meetings of said board, to be paid out of the insurance and retirement fund.

SEC. 6. The fiscal year of the insurance and retirement fund shall begin on the 1st day of August and shall end on the 31st day of July. The board of trustees shall present annually to the fund association at its annual meeting hereinfater provided for, a report of the condition of said funds for the last preceding year, which shall include the receipts and expenditures on account of the fund, together with a list of the beneficiaries thereof and of the securities in which said fund is invested. A copy of said report shall be sent to the governor, a copy shall be retained by the State superintendent of education, and a copy sent to each county superintendent, city superintendent, graded school principal, and the superintendent or president of each State educational institution. This report shall be published in the biennial report of the State superintendent of education.

SEC. 7. The treasurer of the State shall be ex officio treasurer of the teachers' insurance and retirement fund, and his general bond to the State shall cover any liabilities for his acts as treasurer of said fund. He shall receive all moneys payable to said fund and pay out the same only on warrants issued by the State auditor upon vouchers signed by the president and secretary of the board of trustees. Said treasurer shall give receipts for all moneys received by him for said fund, shall keep full and correct account of the financial transactions connected therewith, and shall make an annual report to the board of trustees at its annual meeting of the receipts and disbursements and other financial transactions connected with said fund.

SEC. 8. Any person employed as teacher, when this act takes effect, in any public school in this State or in any other educational institution included in section 1 of this act shall be permitted to become a member of the fund association and to receive the benefits of this act, if application be made in writing to the board of trustees of the teachers' insurance and retirement fund on or before September 1, 1917. At the time of making application to the board of trustees as herein provided, such teachers shall notify the local school board or managing body of the institution in which he or she is employed, in writing, of his or her election to come within the provisions of this act, and shall authorize said board or managing body as a part of said notice to deduct or withhold on every pay day from his or her salary the amount which he or she would pay into the fund, as specified in section 2.

Any person who shall accept employment in this State as a teacher, as hereinabove defined, after September 1, 1915, and who shall not have been employed in this State at the time this act takes effect, shall by virtue of the acceptance of such employment become subject to all terms, provisions, and conditions of this act, and shall become a member of the fund association.

SEC. 9. Any member of the fund association who shall have rendered 20 years or more of service as a teacher in the public schools, 1 year of which may have been a leave of absence for study, and at least 15 years of which, including the last 5 immediately preceding the term of retirement, have been spent in the public schools of this State, and who ceases to be employed as a teacher for any reason, shall be retired at his or her own request by the board of trustees and receive an annuity in accordance with the following schedule:

For 20 years of service, $350; for 21 years of service, $380; for 22 years of service, $410; for 23 years of service, $440; for 24 years of service, $470; for 25 years of service, $500.

In computing the time of service of a teacher the length of the legal school year in the district or institution where such service was rendered shall constitute a year, provided such a year shall not be less than seven months. In a calendar year credit shall be allowed for only one year of service. If a teacher teaches for only a fractional part of any year, credit shall be given for such fractional part of a year as the term of service rendered shall bear to the legal school year of such district or institution, but in no case shall the legal year be less than seven months.

Such annuities shall be paid quarterly.

Any teacher who shall become mentally or physically incapacitated after having served as teacher for 15 years, 10 of which shall have been in this State, shall be entitled to receive an annual benefit from the insurance and retirement fund equal to as many twentieths of the full annuity for 20 years as the term of total service rendered by such teacher bears to 20 years.

Any person retiring under the provisions of this section may return to the work of teaching in said public schools, but during said term of teaching the annuity or benefit paid to such person shall cease. Said annuity shall again be paid to such person upon his or her further retirement.

SEC. 10. In the event that any member of the fund association ceases to be a teacher in the State and thereby terminates membership in the fund association before drawing an annuity, such member shall, if application be made in writing to the board of trustees within six months after his or her resignation, be entitled to the return of the fund without interest of such sum as shall equal one-half of all moneys paid into the fund by such teacher: *Provided further*, That in the event such teacher subsequently returns to teaching in Minnesota and thereby becomes a member of said association, such teacher shall be required to refund to said insurance and retirement fund the amount so drawn with interest thereon at the rate of 5 per cent per annum, such sum to be refunded within one year from his or her return. In case of the death of any member of this fund association before an annuity shall have been drawn from said fund, the board of trustees shall refund to his or her estate, heirs, or assigns an amount equal to one-half that actually paid into the fund by said member.

SEC. 11. The annuity so created shall not be subject to assignment or seizure on legal process against any beneficiary.

SEC. 12. The board of trustees may ratably reduce the annuities provided in this act whenever, in the judgment of the board, the condition of the fund shall require such reduction.

SEC. 13. Annuities may be granted by the board of trustees at any time after the passage of this act, such annuities beginning at the date on which the grant is made, but no payments shall be made before September 1, 1916.

SEC. 14. At the time and place of the meeting of the Minnesota educational association in 1915, those teachers who have qualified as members of the fund association by complying with the provisions of section 8 of this act shall meet at the call of the State superintendent of education for the purpose of electing from said members of the fund association two members of the board of trustees of the teachers' insurance and retirement fund, as hereinbefore provided, and annually thereafter at the time and place of the annual meeting of the Minnesota Educational Association the board of trustees shall call a meeting of the members of the fund association for the purpose of electing one or more members, as may be required, of said board of trustees, and hearing the annual report of said board, and of transacting any other business that may properly come before said meeting.

SEC. 15. This act shall not apply to any city of the first class in this State.

NEW HAMPSHIRE[1] (1915).

SECTION 1. Any woman who, being on the 1st day of September, 1915, or thereafter, of the age of 55 years, and who for 30 years shall have been employed as a teacher in the public schools of this or some other State, or in such other schools in this or some other State as are supported wholly or in part by State or town or school district appropriation and are under public management and control, 15 years of which employment, including the 10 years preceding her ceasing to teach, shall have been in some of the before-mentioned schools of this State, and who shall have been retired, or shall voluntarily have retired, from active service, shall, upon her formal application directed to the State superintendent of public instruction, and upon the certification by the said superintendent to the governor and council, as hereinafter provided, receive from the State for the year ending August 31, 1916, or for such part of said year as she may be so retired, a pension at the rate for the full year of 50 per cent of the average annual salary of such teacher for the five years last preceding her ceasing to teach. In figuring such average, deductions from the teacher's pay for absence or other causes during said five years' period shall be considered as a part of teacher's salary.

SEC. 2. Retired male teachers shall receive pensions upon the same terms as those set forth for women in this act: *Provided, however,* That any man, to be entitled to receive the full pension, must be of the age of 60 years and must have taught 35 years.

SEC. 3. No person shall receive a pension under the terms of this act unless such person shall, at the time of application for such pension, hold a State teacher's certificate or a service certificate issued under the authority of chapter 49, Laws of 1895, and amendments thereto, or a similar certificate issued by the chief educational officer of another State or country having standards of certification equivalent to those of this State: *Provided,* That this limitation as to certification shall not apply to teachers who have permanently ceased to teach before the passage of this act.

SEC. 4. Any retired teacher of the required age who shall before ceasing to teach have taught 15 years in this State, including 10 years immediately preceding such ceasing to teach, but shall not have taught in all for 35 years, in the case of a man, or 30 years in the case of a woman, shall be entitled to such proportion of the full pension herein provided as the actual total number of years taught bears to 35 in the case of a man or to 30 in the case of a woman.

SEC. 5. Any teacher forced to retire because of physical or mental disability before reaching the age of 60, if a man, or of 55 if a woman, shall, if otherwise entitled to a pension under the provisions of this act, receive a pension based upon the proportion of the full pension which the total number of years taught, plus the number of years of enforced retirement, bears to 35 in the case of a man, or to 30 in the case of a woman, not exceeding, however, the full pension.

SEC. 6. In computing the number of years of actual service of any teacher before retirement, no deduction shall be made for leaves of absence during sickness or disability, provided after such sickness or disability the teacher resumed teaching; but deduction shall be made for time the teacher is engaged in some other gainful occupation.

SEC. 7. The State superintendent of public instruction shall, on or before the 1st day of August, 1915, subject to the approval of the governor and council, formulate rules and regulations for carrying into effect the provisions of this act, and shall give such publication to the same as he may deem desirable. But the unsupported statement of the applicant for a pension, whether sworn or unsworn, shall not be considered as proof of any fact necessary to determine the eligibility of the applicant to receive such pension.

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[1] Noncontributory plan.

SEC. 8. The State superintendent of public instruction shall investigate all applications received for a pension under the provisions of this act and shall, on or before the 30th day of November, 1915, and quarterly thereafter, certify to the governor and council the names of the persons who are entitled to pensions under the provisions of this act, and the governor, with the advice and consent of the council, shall draw warrants on the State treasurer for payment of the pensions in favor of said persons. Such payments shall be made in quarterly installments. In case one-quarter of the appropriation herein made, less expense of administration, shall be insufficient to pay the quarterly installments of all of the persons certified to the governor and council as entitled thereto, the governor, with the advice and consent of the council, shall draw warrants to the amount of only one-quarter of the appropriation, less expenses of administration, preference being given to those certified as entitled in the order of their age.

SEC. 9. Every pension shall terminate upon the death of the recipient, and the proportional part of the pension due at the time of such death shall be paid to the legal representative of the deceased.

SEC. 10. All pensions granted or payable under the provisions of this act shall be and are hereby made exempt from levy upon execution and from attachment upon trustee process.

SEC. 11. The sum of $10,000 is hereby appropriated for the fiscal year ending August 31, 1916, to carry out the provisions of this act.

SEC. 12. This act shall take effect upon its passage.

Approved April 21, 1915.

APPENDIX B.

TEACHERS' PENSIONS.[1]

By Clyde Furst,

Secretary Carnegie Foundation for the Advancement of Teaching.

The fundamental principles of a pension system may be stated briefly. Only those, however, who have studied the great mass of pension literature are likely to give full acceptance to them at once. It is not easy to understand, for example, that a non-contributory pension is the most costly to the beneficiary—that free pensions, paid by a government or other agency, are in the long run so expensive that the individual can not afford to trust his future to them.

Among those, however, who have given thorough study to pensions, from the standpoint of the needs of those whom the systems are intended to serve, and who have followed the history of the breakdown of one system after another, there is practical agreement that the following fundamental principles are applicable to all pension systems which involve large groups.

I. A pension is but one feature of the relief system needed by any given group. Only a minority of those who become teachers, or government employees, or machinists, will live to enjoy a pension, however provided. A relief system must be planned with special reference to the group it is intended to serve. Among railroad employees the risk of accident is greater than among teachers. Sickness is a risk common to teachers and railroad employees, but teachers are better able to deal with it as individuals. In general, a relief system will undertake only those capital risks of life which can best be met by cooperative effort. In the case of teachers death, dependence in old age, and disability are such risks.

II. A pension system can be operated successfully only in a fairly homogeneous group; that is to say, when the members of the group live under like conditions, are subject to similar risks, and have rates of pay which are comparable.

III. A relief system, to accomplish its purpose, must include practically all members of the group. Otherwise those who most need its benefits are least likely to enjoy them.

IV. Two plans have been followed in the establishment of pension systems for large groups:

The Reserve Plan, under which the necessary reserve for each beneficiary is set aside year by year. This, with the accumulated interest, will provide the pension when it may become due.

The Cash Disbursement Plan, under which pensions are simply paid out of current funds such as those provided by government appropriations or from an endowment.

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[1] Read before the National Education Association, New York, July 6. Reprinted here from "School and Society," Vol. IV, No. 83, pp. 154-159, July 29, 1916.

The same pension benefits may be paid under both plans, but the cost under the reserve plan is measured by the percentage of the pay roll necessary to accumulate future pensions, while the cost under the cash disbursement plan is measured by the percentage of the annual pay roll required for the full pension benefits. The cost under the reserve plan is a constant factor, which in the case of a college teacher would entail a payment of from 4 to 5 per cent of his pay by the teacher and by the college. The cost under the cash disbursement plan is a changing and constantly increasing factor which may eventually amount to 20 per cent of the active pay roll or more. The reserve plan adapts itself to a contributory pension, the cash disbursement plan to a free pension paid without the participation of the beneficiary.

V. Systems offering a free pension upon the cash disbursement plan have repeatedly broken down through their great cost, unless upheld by the resources of a government. Even in governmental pensions the cost has mounted to such proportions as to endanger the permanency of the system. Under a free pension system every tendency is toward increase. No actuarial computation can take account of the charitable, political, and social influences which tend to increase the load. Experience shows also that the beneficiaries of a free pension system in time become dissatisfied, and claim that such pensions are merely deferred pay and that they benefit the few at the expense of the many.

VI. The employee entering his vocation and looking forward over a span of 30 to 40 years to the protection of a pension is most of all concerned in its security. If he is to plan his life upon the use of a pension at an agreed age, he desires above all absolute certainty that the pension will be ready at the date named. There is no way in which this can be assured except by setting aside year by year the reserve necessary to provide it. Nothing short of a contract providing this reserve will give him such security, and this he can get only by a participation in the accumulation of the reserve.

VII. A pension system on the reserve plan, sustained by joint contributions of employer and employee, is therefore not only the fairest and most equitable form of pension system, but it is the only one in which the cost can be ascertained in advance, in which the question of pension is separated from the question of pay, and it is the only form of pension which can be permanently secure. The man of 30, whether he be teacher, Government clerk, or industrial worker, can be sure of the pension promised 35 years in advance only when it rests upon this economic basis.

The justification of pensions for teachers, in particular, is economic, social, and educational. Economically the work of an organization is not effective unless there is a satisfactory method of retiring aged or infirm workers. Only a satisfactory pension system can prevent either the dismissal of aged or infirm teachers without resources or the sacrifice of the welfare of the pupils in order to continue the employment of teachers who are no longer capable of good work. Socially, men and women of character, intelligence, and devotion are willing to perform difficult social services that are poorly paid; but it is too much to expect them also to face old age and disability without the prospect of some protection. Educationally, there is great need to secure and retain able teachers in the schools. At present only about 5 per cent of the men and 15 per cent of the women who enter teaching make it a permanent career.

For all of these reasons the development of pension systems for teachers has been rapid and widespread in the United States. Ten were founded between 1890 and 1900; 25 between 1900 and 1910; and 31 between 1910 and 1915. More than half of our States now have some form of pensions for teachers.

The cost of a pension system for teachers may be borne by the teacher alone, by the public alone, or by the teacher and the public together. If the cost is borne by the teacher alone, he can scarcely afford, out of a small salary, to set aside enough money to purchase adequate protection, and the public fails to fulfill a plain obligation. If the cost is borne by the public alone, the money is really taken from the teachers' salaries without their agreement, cooperation is weakened, and the teachers suffer in independence and lose an incentive to personal thrift. When the cost is borne by the teachers and the public together, the teacher receives appropriate reward and protection, and both the teacher and the public meet an economic, social, and educational obligation. The principle of cooperation between the teacher and the public is recognized by most of the pension systems that are now in operation.

The application of the principle of cooperation, however, is not so satisfactory. Only a dozen systems relate the amount of the public contribution to that of the teacher. In these cases it ranges from one-half to three times that of the teacher, being usually an equal amount. Frequently public money is expected from sources which bear no relation to the amount of money needed for pensions. Excise, inheritance, license or transfer receipts, or deductions, fines, or forfeitures from teachers' salaries for absence or illness, or from tuitions of nonresident students, do not furnish a reliable basis for pensions. Equally unsatisfactory is the expectation of paying pensions, when they fall due, from current school or other funds, without any assurance that these funds will be adequate, or from special or general appropriations, without any certainty that such appropriations will be made. Indeed, it is not uncommon to limit in advance the sums that may be taken from such sources, thus reducing the proportion of the pension that can be paid, or leaving the whole question of payment largely to accident. Because of these facts, no teacher can be certain that any pension system now in existence will or can pay any pension that has been promised.

The only way in which security can be obtained is for the contribution of the public, as well as that of the teacher, to be paid in annually and set aside to accumulate against the time when it will be needed. This also is the only economical method. Any system which agrees to pay a pension from current funds after the teacher retires, plans to spend two or three times as much money for that pension as would be required if sums were set aside each year to accumulate it during the teacher's period of service.

Pension systems for teachers in the United States, moreover, are so organized at present that it is impossible for anybody to estimate the cost of any one of them. The probable length of life of a teacher in service or after retirement may be estimated with a fair degree of safety from the tables of mortality that have been developed by the life-insurance companies, although it begins to appear that teachers live longer than other people. Estimates of the likelihood of disability, however, and the probable length of life after retirement because of disability are still without an adequate basis. It will be a long while before reliable estimates can be made of the probability of being dismissed, or of resigning, or of the age at which one will choose to retire. It is quite certain that no one can predict what any teacher's salary will be 30, or 40, or 50 years hence, and yet practically all pensions are based to some extent upon the salary at the time of retirement.

The fact that no one of our existing pension systems is satisfactory is explained by their history. These systems are, for the most part, very new, and they have in the main imitated government systems, the great resources of which have caused the question of cost to be neglected. The difficulties of the English civil-service pensions in 1909, and the failure and the reorganization of those of New South Wales in 1912, however, proved that even a government can not afford a careless pension system. These difficulties and those of Porto Rico, New Jersey, Maryland, and Virginia, and of New York City, Indianapolis, Cincinnati, and Philadelphia, have greatly stimulated the study of pensions, with the result that we may hope to enter upon a sounder era.

There is, of course, a definite relation between pension benefits and pension costs. At present both teacher and public desire benefits that are impossibly expensive in return for contributions that are too small to provide even modest benefits. Some systems, for example, promise retirement after 20 years of service, or at the age of 50; in others teachers contribute only one-half of 1 per cent of their salaries; in yet others the public contributes only one-half as much as the teachers.

Such mistakes may easily be corrected by a very simple pension system, based upon the tables of mortality that are used by the life-insurance companies, and upon a safe rate of interest, with the provision that the teacher receives the benefit of all of his accumulations. We can tell in this way what certain desired benefits will cost, or what benefits can be had for whatever definite sum of money is available. It is very simple to estimate what any annual contribution, beginning at any age, and accumulating at a given percentage, will amount to after any number of years. If all of the money is deposited in a central fund each contributor can be guaranteed a definite annuity for life, since the lives of all are averaged in the standard mortality tables. Thus, an annual contribution of $100 a year beginning at the age of 25 and accumulated at 3½ per cent interest will provide a man with an annuity for life, according to the McClintock table of mortality, of $894 a year beginning at the age of 60, or of $1,550 a year beginning at 65, or of $2,959 a year beginning at 70. The annuities from such a contribution for women, who live longer than men, would be about three-fourths of the sums that have been mentioned.

If it is desired, for the sake of family protection, there may be, also, a return of the accumulations of the teacher who dies before retirement, and a return of the balance of the accumulations of the teacher who retires but dies before he has drawn all of his accumulations. This also can be calculated from the standard mortality and interest tables.

If, further, protection is desired against disability, this can be similarly provided, by the use of the best tables that we have, with the proviso that the rates for those who enter into the system in the future may be modified according to future experience.

Should it be desired finally to return part or all of the accumulations of those who withdraw from the system for any reason, this also can be provided for on the basis of the very limited withdrawal tables that are available, with the proviso that the rates for new entrants be adjusted periodically on the basis of accumulated experience.

The cost of each of these additional benefits has never been calculated separately, but it has been roughly estimated that the cost of an annuity alone is about doubled by adding the benefits of a proportionate annuity for life beginning with permanent disability at whatever age; and a guarantee of the return of all of the teacher's accumulations in case of withdrawal from the service, in case of death before retirement, or in case of death after retirement before all of his accumulations have been used.

A pension system of the kind that has been mentioned would be just and fair to all concerned, giving the teacher secure and adequate protection at a reasonable cost to himself and to the public. It would not be necessary to change the present form of administration, which is generally through a special board of five or seven persons, upon which the teachers and the public are about equally represented. It will be important, however, to have the actual work done by competent, full-time experts, under the supervision of the state banking and insurance departments.

According to such a plan all systems will provide for retirement on the basis of age, although only two-fifths of them do so at present. The age of retirement, which is now usually fixed, can be left to the teacher and the administration. If the need is great, retirement may be earlier, in spite of the fact that the smaller accumulations would then make the pension smaller. In general, retirement will, in all probability, be later than at present, because of the larger pension provided by the longer accumulation and the educational desirability of keeping the able teacher in service as long as possible.

Disability can be provided for by using whatever money has been accumulated at the time when retirement becomes unavoidable. Retirement on the basis of service alone is a luxury which neither the teacher nor the public appears to be willing or able to pay for. It is, moreover, educationally unfortunate in encouraging the withdrawal from service of experienced teachers at the time when they are doing their best work.

Those who are dependent upon the teacher may be better protected than at present, since the form of contribution will set up a contractual relation which may provide definite returns in case of withdrawal or death. Return of contribution in case of resignation is now generally provided for, but return in case of dismissal is provided for only by one-third of our systems, and return in case of death is provided for only by one-fifth. The amount of the accumulation that is returned now varies from one-half to the whole, and is usually without interest. Contractual arrangements for the return of contributions, also, will facilitate the transfer of the teacher from one system to another, which is desirable. Indeed, pension systems throughout the country would become practically uniform, so that the experience of each would help all.

Membership in the systems will need to be, as it usually is at present, required of all new teachers, at least for the minimum protection. For teachers already in service membership may be optional, although this constitutes one of the most difficult of all pension problems—that of properly providing for the retirement of teachers who have not contributed throughout their active service. Probably the best plan is to require the participation of all teachers toward a minimum protection, basing each teacher's contribution on the rate for his age at entering the service, and dividing the additional amount needed between the teachers and the public, so that the oldest teachers shall be helped most.

It remains only to say that the Carnegie Foundation is in the midst of the process of changing its own pension system to the form that has been outlined here and that it will be glad to send its studies of present systems and its new plan to anyone who is interested.

APPENDIX C.

NOTES ON THE LEGISLATIVE HISTORY OF THE NEW JERSEY 35 YEARS' HALF-PAY PENSION LAW.

By A. W. Milbury,
Secretary Board of Trustees, Teachers' Retirement Fund of New Jersey.

1. Chapter 16, page 33, Laws of 1903, provided for the retirement, on his own application, on half pay, of any teacher who had served for 40 years consecutively in the same district, the pension to be paid by the school district from which the pensioner was retired. The employing board was not given authority to retire a teacher except on his or her application.

2. Chapter 103, page 167, Laws of 1906, provided retirement on half of average annual pay for last five years of service, at expense of the employing or retiring district, of any teacher, principal, or superintendent, on his or her application *or by resolution of the employing board*, who shall have been employed in New Jersey's public school system not less than 35 years and at least 20 years in the district in which he or she shall be retired. This 1906 act was the first to provide that an employing board might retire a teacher of its own volition, without the application or consent of the teacher. It reduced the entire term of service in New Jersey from 40 to 35 years, made service in the district at least 20, instead of 40 years, and omitted the word "consecutively."

3. Chapter 121, page 286, Laws of 1907, again amended the statute, but only as to the manner in which the district shall provide funds for the payment of the pension.

All the foregoing acts provided that the entire period of service (first 40, then 35 years) shall be in New Jersey.

4. Chapter 276, page 588, Laws of 1911, changed this by providing that the not less than 35 years' public school service shall have been performed "in this State or in any other State," *provided*, he or she "shall have been employed at least 20 years by the district which retires him or her." Payment was to be by the district. The pension amounted to half the average of the last five years' annual salary. Retirement was on the initiative of the teacher or of the employing board.

5. Chapter 58, page 89, Laws of 1912, provided that "any teacher, principal, or superintendent who shall have been employed in the public school work not less than 35 years," etc., shall be entitled to the half-pay pension. This amendment is obscure. The clause, "the public school work," was construed by some boards of education to mean that the entire 35 years must have been in New Jersey, and by others to mean only the "at least 20 years," in the district from which he or she was retired; that is, that 15 of the 35 years' service might have been outside of New Jersey, *provided* that "at least" 20 years' service had been in the district from which the party was retired on pension. The amount of pension and manner of payment were not changed.

All the foregoing acts, it will be noted, prescribed that at least 20 of the 35 years' service must be in the district from which the teacher was retired on pension, the district paying the pension. This was unfortunate, because many teachers who had taught 35, 40, 50, or even more years in New Jersey, had never taught 20 years in one district. The law therefore discriminated against these veterans. The original, 1903, act was 40 years consecutively in the same district.

6. Chapter 268, page 557, Laws of 1914, amended the statute so that "after a total period of not less than 35 years of actual service, every teacher, teacher-clerk, principal, and person employed in any supervisory capacity in or under any system of free publiic schools in this State or any other State * * * provided that the last 25 years of such actual service shall have been performed in this State," shall on his or her application or by resolution of his or her employing board be retired on half the average salary of the last five years' employment, the pension to be paid by the State (not by the district, as theretofore) and the administration of the act to be vested in the State department of public instruction. The 1914 act created eligibility to pension under several other conditions, but these were intended to cover certain specific cases; they do not affect materially the main proposition, and are specified in the tabulation.

The transference of the "at least" 20 years' experience from a single district to the State at large made the law far more equitable than before, because it protects *all* the veteran teachers of the State, not only those fortunate ones who have been employed "at least 20 years" in the district from which they were retired. Further, by transferring the payment of the pension from the district to the State, the antagonism of small and poor country districts was largely removed, and the tenure of teachers was made more secure, as the temptation of districts to "get rid" of a teacher to avoid paying a pension was removed, at least to a considerable degree.

Experience indicates, however, that the State 35 years' half-pay pension act could have been more effectively safeguarded. Some boards of education are taking advantage of the power granted by the words "or by resolution of the employing board" to retire efficient teachers who have complied with the time-service provision, even though such teachers do not wish to retire and protest against it. It is not necessary to discuss the motives of boards in such cases. Those who are acquainted with school administration and human nature will understand how spite, personal grievance, the fact that a relative or friend wishes the position, etc., may enter in. This not only works injury to the individual, but it works injury to the educational system; it is unjust to the taxpayers who bear the double burden of pension and of salary for the new incumbent, and it is dangerous to the pension plan, because it is likely to create so heavy a pension tax that the system will collapse by its own weight. A disability provision should have been added to the 35 years' clause, and perhaps an age limit without disability.

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INDEX

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REORGANIZING A COUNTY SYSTEM OF RURAL SCHOOLS

REPORT OF A STUDY OF THE SCHOOLS OF SAN MATEO COUNTY, CALIFORNIA

By J. HAROLD WILLIAMS

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MAP AND CHARTS.

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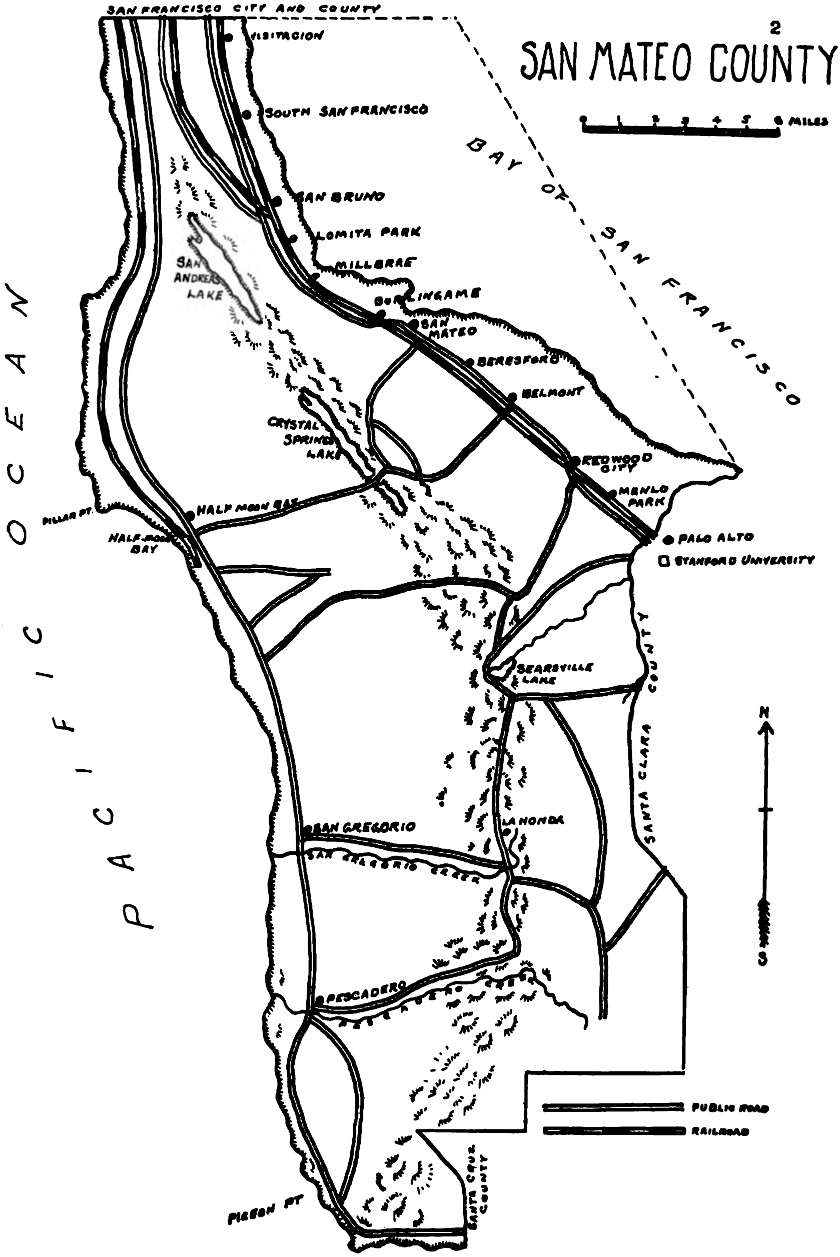

Map of San Mateo County, Cal.

INTRODUCTION.

The purpose of this study has been (1) to make a careful survey of the county, touching upon its geological, geographical, social, and economic features; (2) to survey the system of schools now provided by the many districts in the county; and (3) to propose a system of public schools to meet more adequately the needs of the people of this larger community.

Material has been gathered by a personal visit to every town and nearly every school in the county; by talks with teachers, pupils, parents, business men, and county officials, as well as by written records. Question blanks were presented to each of the rural schools, and were filled out by the pupils in the presence of the investigator. Blanks were also sent to many of the teachers and parents in various districts. Other information was furnished at the county offices, at Redwood City.

Acknowledgments are due Dr. E. P. Cubberley, of the Department of Education, Stanford University, who suggested the survey, and under whose direction it was made; also to Prof. J. B. Sears, for valuable assistance in studying the rural schools.

REORGANIZING A COUNTY SYSTEM OF RURAL SCHOOLS.

Chapter I.

A GENERAL SURVEY OF THE COUNTY.

I. GEOGRAPHICAL AND GEOLOGICAL FEATURES.[1]

San Mateo County lies in the west-central portion of California, on the Pacific coast, in that portion of the State known as the San Francisco Peninsula. It has an area of 477 square miles; there are only two smaller counties in the State. It has a length of 39 miles, and varies in width from 5 to 20 miles, averaging about 12½. It is bounded on the north by San Francisco City and County, on the east by the Bay of San Francisco and Santa Clara County, on the south by Santa Clara and Santa Cruz Counties, and on the west by the Pacific Ocean. The ocean touches the western side with a shore line of more than 50 miles, and the bay extends along the eastern border for 30 miles.

Through the center of the county, from northeast to southwest, runs the Coast Range—a low group of mountains rising from the sea level on either side, reaching, by a series of low foothills, an altitude of 2,500 feet. The Portola Valley, an important farming region, lies east of the ridge. The western portion is rough, and is cut by many deep valleys and gorges, while on the east the foothills gradually drop to the level plain along the bay shore.

It is in this plain, really an extension of the fertile Santa Clara Valley to the south, that the more important towns are located. Through this plain the Southern Pacific Railroad extends south from San Francisco, and a strip of salt marsh separates these towns from the bay.

There are no navigable rivers or large streams. There are seven streams of fair size along the western side, some of which might be utilized for power at some time, although no recent attempts have been made in that direction.

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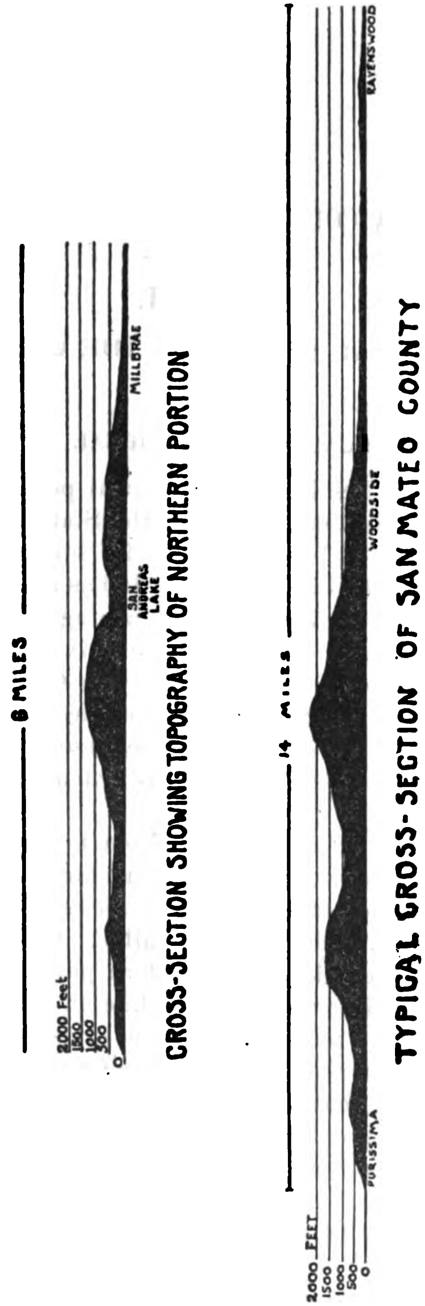
[1] This survey was made in 1913–14. Changes have taken place since, but not such as to vitiate the conclusions.

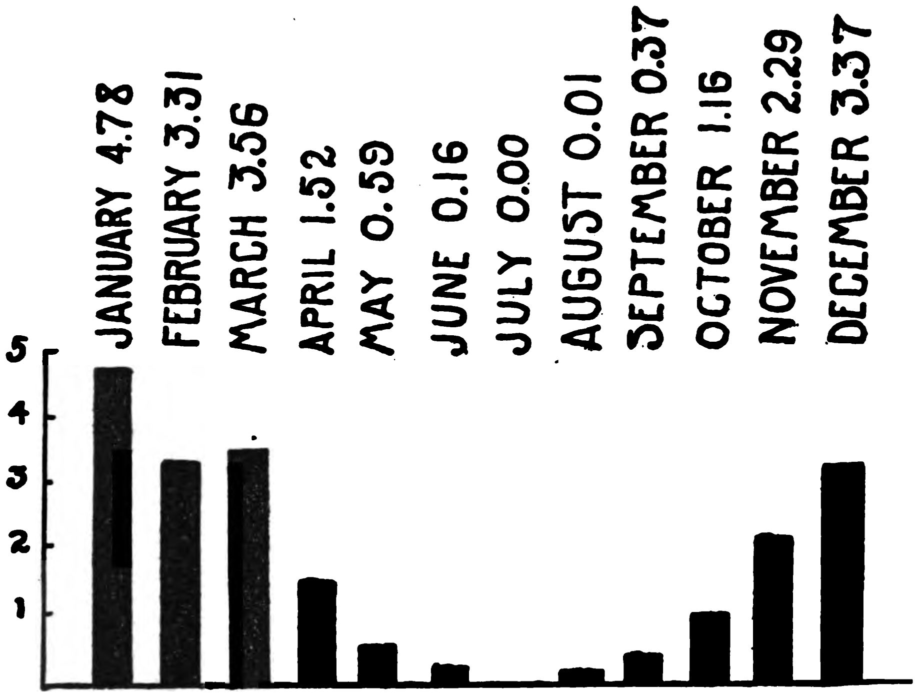


CROSS-SECTION SHOWING TOPOGRAPHY OF NORTHERN PORTION

TYPICAL CROSS-SECTION OF SAN MATEO COUNTY

CHART 1.—Topography of San Mateo County.

There are four lakes, three of which constitute the Crystal Springs chain, on the high ridge in the central portion of the county to the north, forming part of a series of reservoirs owned by the Spring Valley Water Co., which has been furnishing most of the water supply for the city of San Francisco, as well as for some of the smaller towns along the peninsula. The fourth lake, which is known as the Searsville Lake, furnishes an irrigation supply for the vicinity of Palo Alto and Stanford University, across the line in Santa Clara County.



DISTRIBUTION OF RAINFALL AT SAN MATEO
AVERAGE FOR 25 YEARS

CHART 2.

The rainfall in San Mateo County is usually abundant, averaging for the city of San Mateo 21.12 inches annually. The crops are generally good, with a marked degree of regularity. Of the land in the county, 1.3 per cent is under irrigation.

The county has no mineral resources; although both silver and petroleum have been found, they are of no economic importance.

II. ECONOMIC AND INDUSTRIAL CONDITIONS.

The principal business of the people of the county is farming. There are 665 farms, varying in size from 1 to 1,000 acres. The following table shows the number of farms of each of the several sizes:

FARMS AND FARM AREA.

	Farms.		Farms.
Under 3 acres	46	100 to 174 acres	90
3 to 9 acres	81	175 to 259 acres	52
10 to 19 acres	55	260 to 499 acres	67
20 to 49 acres	112	500 to 999 acres	60
50 to 99 acres	61	1,000 acres and over	41

The average size of farms is 241.6 acres.

The 665 farms of the county total about 160,655 acres. Of this amount, 100,800 acres, or about 62.7 per cent, are improved land. The per cent of the total land area used for farming, and the relative area of farm lands improved are shown in chart 3.

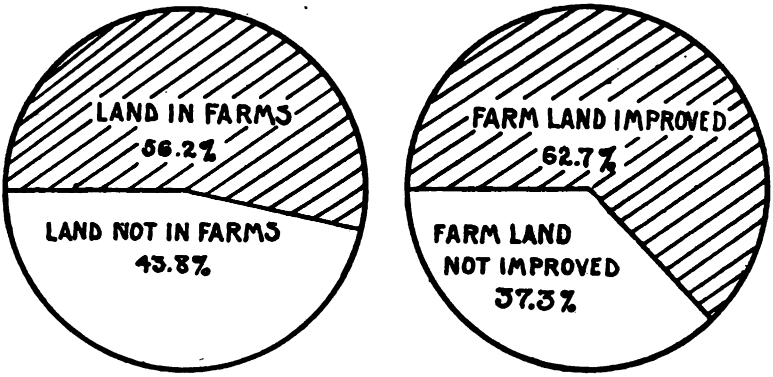


CHART 3.

Although the amount of land devoted to farming has increased but little, the amount of improved land has increased to the extent of 25,400 acres, or about 22 per cent, in the past 10 years. This indicates a steady growth in agricultural activities and promises future development for the county on a firm basis.

The average value of farm land in San Mateo County in 1910 was $108.61 per acre. This is comparatively high. With the exception of the counties of San Francisco and Los Angeles, there are but 2 of the 58 counties in the State where land values are so high.

The following chart compares San Mateo County in this respect with the State and nine average counties:

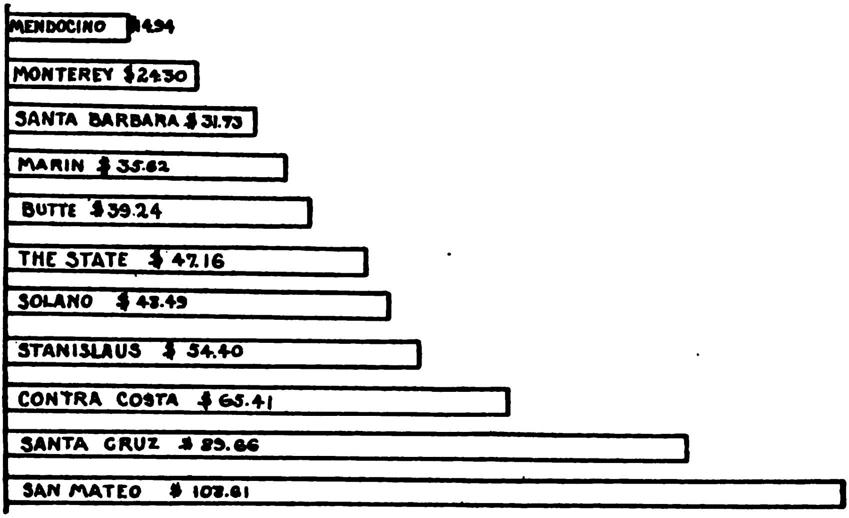


CHART 4.—Average value of farm lands.

The principal crops are hay, grain, potatoes, and garden truck. To the question, What crops do you raise? 10 average farmers, taken at random, replied as follows:

1. Hay, grain.
2. Oats, barley, wheat, hay, corn, beans.
3. Hay, potatoes.
4. Garden truck, berries.
5. Grain, hay.
6. Grain, garden truck.
7. Garden truck.
8. Oats, hay, potatoes (dairying).
9. Oats, barley, wheat.
10. Hay, vegetables.

The value of the vegetable crop for the year 1910 was $1,395,371, being distributed as follows:

Vegetables	$459,470
Hay and forage	361,266
Cereals	260,218
Other grains and seeds	36,742
Fruits and nuts	73,272
All others	204,403

The county ranks high in the production of its vegetable crop. The 10 counties previously compared show the following values of vegetable crops in 1910:

Contra Costa	$1,125,666
San Mateo	*459,470*
Monterey	330,296
Santa Barbara	244,205
Stanislaus	181,282

Santa Cruz	$164,518
Mendocino	121,914
Solano	84,337
Butte	55,314
Marin	42,916

The vegetable crop of the county in 1910 was one twenty-seventh, or nearly 4 per cent, of the vegetable crop of the entire State.

The animal products are slightly less in value. The census report for 1910 gave the following:

Cattle	$463,646
Horses	425,976
Hogs	93,912
Poultry	26,112
Sheep	5,140
Bees	953

The value of the cattle crop for the year 1910, as compared with other counties, was as follows:

Santa Barbara	$35,813
San Mateo	*30,380*
Stanislaus	28,323
Butte	24,553
Mendocino	22,275
Contra Costa	21,899
Solano	21,886
Santa Cruz	19,149
Monterey	13,975
Marin	12,569

The total value of one average year's crops in San Mateo County is approximately $2,000,000. Compared with the total land value, this is an indication of good investment.

There are two industrial plants of much importance to the county. At San Mateo are the Salt Refining Works, which evaporate the water of the bay and by a special process refine the product into a high-grade table salt, with the coarser grades of salt as by-products. This is a large and growing industry, with an unlimited supply of material. The process of evaporation, as carried on at this plant, is made possible along the shores of San Francisco Bay by the fact that here the evaporation exceeds the precipitation by 25 vertical inches annually. Since there are few places in the United States where a similar situation exists, San Mateo County is assured of a large and growing industry of no little national importance. The output of refined salt is 40,000,000 pounds per year.

The tanning factory, at Redwood City, is another large industry of importance to the county. This plant employs 125 men, runs to its full capacity every working day in the year, and produces leather to the value of over $500,000 per year.

The facilities for transportation and communication in the county are good. Two main telegraph lines enter the county, and telephone lines cross in all directions.

The wagon roads are in fairly good condition. At a recent election, bonds to the extent of $1,250,000 were voted for new and improved roads. The roads in need of the most improvement, perhaps, are those leading over the mountains, east and west, across the county.

The new $18,000,000 State automobile highway extends the entire length of the county, along the line of the Southern Pacific Railroad, and this splendid paved road, furnished by the State, is available for the use of the people of San Mateo County for a distance of 30 miles.

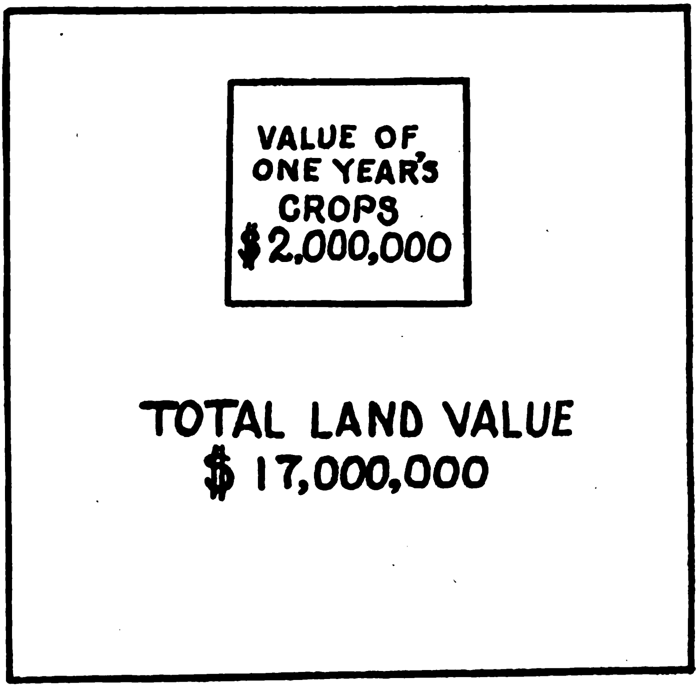


CHART 5.

III. THE PEOPLE OF THE COUNTY.

The population of the county in 1910 was 26,585, an increase of 119.8 per cent in 10 years. This is an exceptionally large increase, compared with the entire State and with other counties. The increase in population in 10 counties during the period 1900 to 1910 was as follows:

	Per cent.
Stanislaus	135.8
San Mateo	*119.8*
Contra Costa	75.5
Marin	59.8
Butte	59.5
Santa Barbara	46.5
Monterey	24.0
Santa Cruz	21.5
Mendocino	16.9
Solano	14.1
The State	60.1

While the county has always enjoyed a steady growth in population, the amount of increase during the past decade is an item of great importance in considering the reorganization of its school system. The following chart shows the increase, by decades, since 1870:

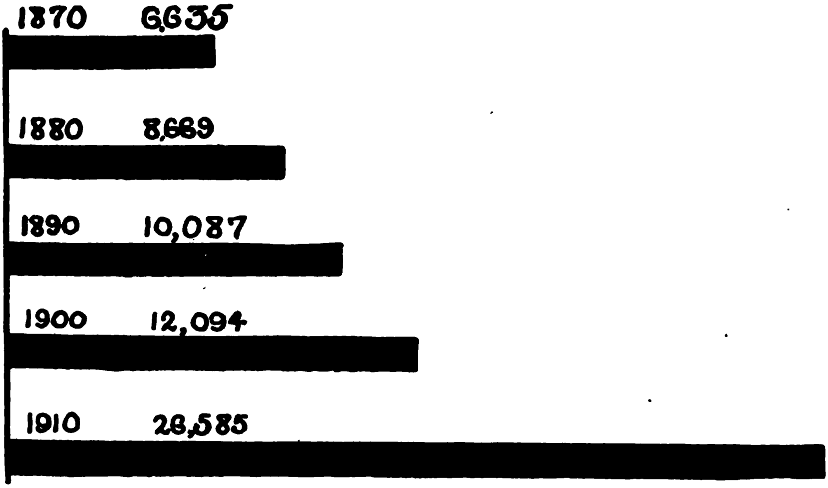


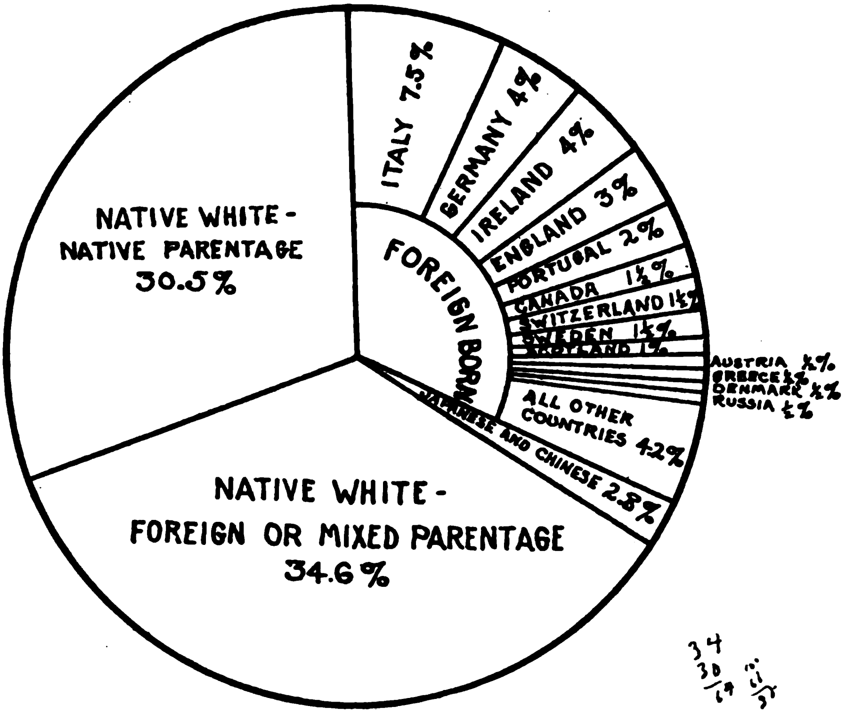
CHART 6.—Increase in population of San Mateo County, by decades.

The greater portion of the people of the county are native-born, although in parentage many different nationalities are represented. The colored population is negligible, there being but 67 Negroes in the county. The cosmopolitan nature of the population is shown in the following chart. A striking feature of the diagram is the nearly equal distribution of the three general parentage classes.

Most of the foreign population are engaged in farming and hence form an important part of nearly all the rural school districts, for the most part of an industrious type and make very desirable and profitable citizens.

As previously noted, nearly all the towns of the county are located along the eastern side on the bay shore. The largest of these towns is San Mateo, with a population of 4,384. The next in size is Redwood City, the county seat, with a population of 2,442. Both are growing rapidly, the former having increased 75 per cent and the latter 50 per cent in the past 10 years, with modern improvements accordingly.

The most interesting fact found in a study of the population is that this county is distinctively a rural one. There are but two towns having a population of 2,000 or more, and the remaining towns are very small. Hence by far the greater portion of the people live in the small rural communities. This, to a great extent, accounts for the large number of small rural school districts, where but one teacher is employed for children of all sizes and ages.



34
30
64

CHART 7.—Composition of population.

The rural population of San Mateo county is nearly 50 persons (49.9) per square mile, which is a much larger proportion than in any other county in California. The map of the State on the following page shows how the county leads all others in this respect. The figures are taken from the census reports for 1910. This map indicates one of the most significant facts to be considered in the survey. In the towns along the Southern Pacific are the homes of many business men of San Francisco. A large number of these are handsome residences, and in most cases the property is extensive and very valuable. The town of Burlingame, just 16 miles south of San Francisco, is a community composed of these people, and is a fashionable residence center. Connections are made with the metropolis by means of steam trains, electric cars, and the new automobile boulevard.

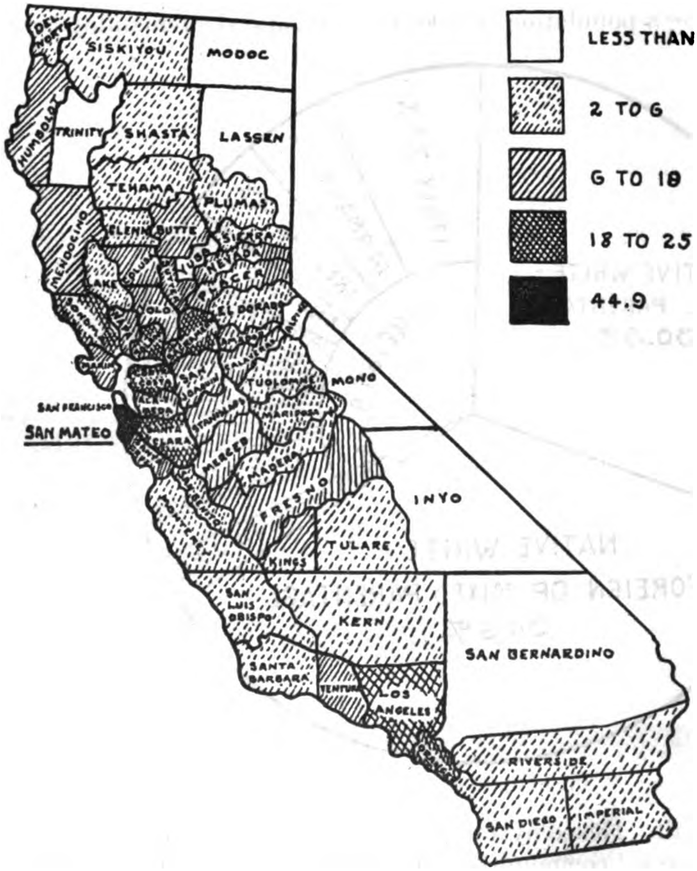


CHART 8.—Rural population of California, by counties.

The amount of illiteracy in the county is high, compared with most California counties. The census of 1910 found 1,684 persons in the county above 10 years of age who could not read and write. This is 7.8 per cent of all the people in the county of that age or over and is a high figure for a California community. There are but 10 counties in the State having so high a percentage of illiteracy, and the average for the State is but 3.7 per cent. The following table compares San Mateo County in this respect with its four neighboring counties:

	Per cent of illiteracy.
San Mateo	7.8
Santa Cruz	4.6
Santa Clara	4.4
Alameda	3.6
San Francisco	2.1

The percentage of male persons in the county of voting age who can not read and write is 10.9. Of the 10,153 male voters, 1,106 are illiterate. This number has decreased in the past decade, however, from 11.7 per cent in 1900 to 10.9 per cent in 1910—an improvement of 1.8 per cent.

IV. GOVERNMENT OF THE COUNTY.

For legal purposes the county is divided into five *townships*, each electing one *supervisor* for a term of four years. These five men constitute the *board of supervisors*, in whose hands all matters pertaining to the county are left, except those delegated to the board of education. The board of supervisors levy the county and district school taxes, appoint the members of the board of education, and fill vacancies in the county offices. Their chief function, however, is to provide and maintain roads and public highways; although any proposition involving the entire county is, indirectly, at least, under their supervision.

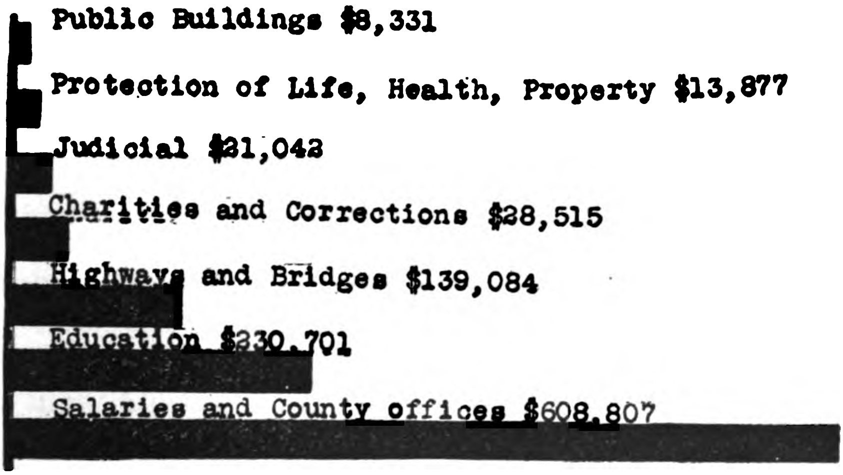


CHART 9.—Relative expenditures in San Mateo County.

There are 20 county officers, 8 of whom are appointed by the board of supervisors. These include health, probation, and traffic officers.

The remaining officials, including the superintendent of schools, are elected for four-year terms by the people of the county. Most of the affairs of the county are well centralized, and matters involving roads, regulations, etc., are decided upon by the county officials with no smaller units of jurisdiction. The civil affairs of the county are well managed.

The following table shows the county appropriations during the past year[1] for salaries and maintenance of the more important offices. The expenditure for the office of superintendent of schools, it will be noted, is among the lowest.

Expenditures for county offices.

Offices.	Salary.	Total allowance for office.
Recorder	$3,500	$11,131.65
Board of supervisors (5)	6,000	10,100.15
Clerk	3,000	8,563.82
Surveyor	1,600	7,820.05
Sheriff	4,500	6,631.55
Tax collector	3,500	6,126.60
District attorney	2,400	4,733.74
Auditor	1,800	3,505.55
Superintendent of schools	2,100	2,638.99
Coroner	Fees.	2,368.55
Treasurer	1,800	1,861.00

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[1] 1913.

Chapter II.

A SURVEY OF THE PRESENT SCHOOL SYSTEM.

I. ORGANIZATION AND ADMINISTRATION.

There is provided, by State law,[1] a county *board of education*, "which shall consist of the county superintendent of schools and four other members, appointed by the board of supervisors of the county." These members, or at least a majority of them, must be "experienced teachers, holding not less than a grammar school certificate in full force and effect." The superintendent of schools acts as secretary of the board ex officio.

The board is required to meet semiannually, and at such other times as the superintendent of schools shall deem it necessary to call them together. Each member receives a compensation of $5 per day for his services, and is allowed 25 cents per mile from his home to the county offices, for each meeting.

The following are the powers and duties of the county board of education, as provided by law:

1. To examine applicants for teacher's certificates.
2. To grant certificates to qualified persons.
3. To revoke certificates.
4. To adopt books and apparatus purchased by the schools of the county.
5. To issue diplomas for graduation from elementary schools.

California is a district-system State, and everywhere the districts, rather than the counties, control the educational affairs. San Mateo County is divided into 36 school districts, 23 of which have rural one-teacher schools. Each district, by law, has a board of trustees consisting of three members elected by the people of the district. Each member of the board is elected for a term of three years.

Each of the 36 boards of trustees is given almost absolute control over the schools of the districts, employing teachers and janitors, determining salaries, erecting buildings, making repairs, buying land, or carrying out any schemes they may see fit, so long as they are not forbidden by law. and provided that they remain within the limits of the funds of the district. For any excess of these funds expended they are personally liable.

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[1] School Laws of California, 1913, p. 167.

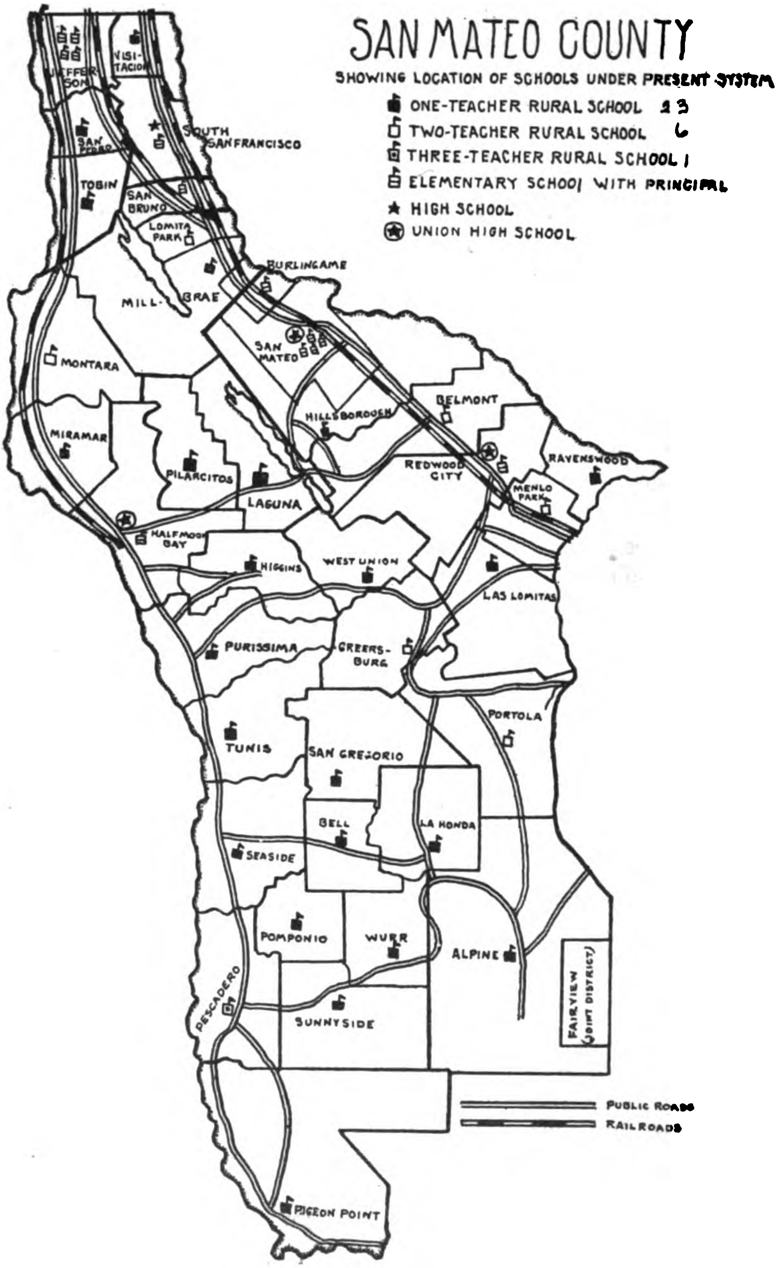


CHART 10.

There are also three high-school districts, each made by the union of several neighboring districts and each having an additional board of five members vested with powers and duties similar to those of city boards of education, and authorized to act independently of the boards of trustees of the districts of which the union district is made.

The map of the county on page 20 shows the location and size of the schools as they now exist, and also the 36 small districts into which the county is divided:

The county superintendent of schools is elected by popular vote for a term of four years. He receives a salary of $2,100 per year, but with no allowance for clerical assistance of any kind. He is by law given the following duties:

1. To superintend the schools of the county.
2. To apportion State and county money to each school district.
3. To visit the schools.
4. To preside over the county teachers' institute.
5. To issue temporary teachers' certificates.
6. To distribute laws, blanks, etc.
7. To make and keep records.
8. To approve plans for school buildings, submitted by the district boards of trustees.
9. To act as secretary to the board of education.
10. To appoint trustees to fill vacancies to hold office until the next district election.

These duties, it will be seen, are, with the exception of No. 1, largely clerical in nature and could be equally well performed by an office clerk of reasonable intelligence. No unusual amount of training or preparation is required.

In duty No. 1, although authorized to "superintend the schools of the county," there are absolutely no powers granted him consistent with the carrying out of that duty. The county superintendent, under the present system, can not determine the site or location of a school building or rearrange desks or seats in any building on account of the inadequacy of the heating or lighting; he can not require more ventilation or condemn any building if these things are not properly provided. He can not select teachers, specify their salaries, direct their method of teaching, or dismiss a teacher for incompetency. He can not require janitor work to be more efficiently carried on, employ additional janitors, or require any school building to be cleaned.

"Supervision" of the schools usually consists in visiting each school in the county once during the school year, as required by law, for a period of from 15 minutes to 1 hour; in asking a few questions of the pupils, generally in the form of an examination in reading, etc., for the purpose of determining whether or not the pupil shall receive the county diploma for graduation; and in meeting the entire teaching body at the yearly teachers' institute. Rarely does the superintendent see or talk with his teachers except on these two annual occasions.

II. A SURVEY OF THE SCHOOLS.

The schools, for convenience in this survey, will be divided into three groups: (a) Elementary schools with supervising principals; (b) high schools; (c) rural schools.

SUPERVISED ELEMENTARY SCHOOLS.

In the towns of South San Francisco, Burlingame, San Mateo, Redwood City, and Half Moon Bay the boards of trustees have employed supervising principals. This is also true of Jefferson district, in the northwest part of the county, where the residence section of San Francisco has extended over the county line. In these districts individual school systems have been worked out and are very efficiently conducted. The following table summarizes the main features to be considered in this report:

School statistics of certain districts.

Names of districts.	Schools.	Enrollment.	Teachers.	Salary of principal
San Mateo	4	985	24	$2,400
Burlingame	1	345	8	1,800
Redwood City	1	467	16	1,800
Half Moon Bay	1	167	5	1,500
South San Francisco	1	455	12	1,800
Jefferson	4	907	24	1,800

All of these school systems, located in districts where land values are high and where increased taxes are permissible, may be classified as good. The buildings, in all cases, are large and substantial, and although somewhat crowded, are merely confronted with the ordinary problems of growing towns and young cities. The teachers, in general, are well selected and well paid, and the equipment is complete and modern. The principals are mature school men, and their presence at the county institutes is very beneficial to the rural teachers.

The control of these systems, however, by the local board of trustees, the drawing of definite district lines, and the lack of transportation facilities, make the efficiency of these schools much below the point which could be reached if they were placed under the jurisdiction of the county as a single unit.

THE HIGH SCHOOLS.

There are four high schools in the county, located, respectively, at San Mateo, Redwood City, Half Moon Bay, and South San Francisco. The first three named are "union" high schools and are maintained by the consolidation of several districts for that purpose only. The high school at South San Francisco is small and is not a "union" school, but is maintained by the one district.

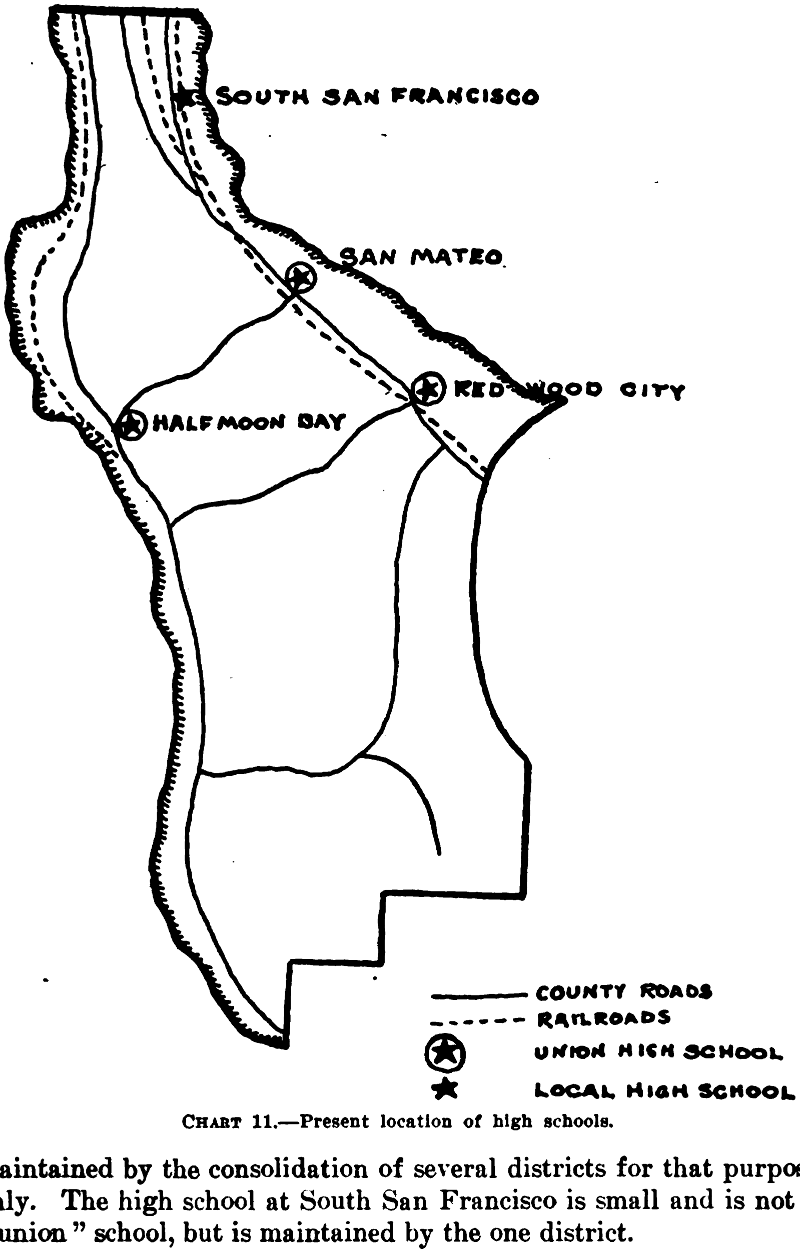


CHART 11.—Present location of high schools.

The union high schools are doing very effective work and constitute a commendable part of the school system of the county. They are all well supervised and employ excellent teachers. The San Mateo Union High School, the largest in the county, ranks among the best in the State.

The following table summarizes the general information to be considered in surveying the high-school possibilities of the county:

Statistics of union high schools.

Schools.	Value of building.	Teachers.	Pupils.	Salary of principal.
San Mateo Union High School	$290,000	13	222	$2,500
Sequoia Union High School	59,540	8	93	2,200
Half Moon Bay Union High School	30,000	5	32	1,500

The opportunities for high-school attendance, however, are inadequate. No means of transportation has yet been offered by any of the schools, or by the county, and the enrollment is made up largely of pupils living in the town in which the school is located, or from near-by towns where railroad facilities exist. Only a small per cent of the children from the rural districts reach the high school, and then only when it is within walking distance or there is a family conveyance. At Half Moon Bay the board of trustees has attempted to meet this problem part way, by providing feed and shelter for horses which are used by the children for bringing them to the school. The trustees here see that the horses are well cared for, kept shod, etc. This effort on the part of the officials of the school to encourage the attendance of the pupils of the rural districts is to be commended, and is but suggesting the larger work that the county should be doing to provide for the rural children.

The county should provide suitable means of free transportation for all pupils in the rural districts who can attend high school. There should also be at least one complete four-year high school and an intermediate, or two-year, high school in the central portion of the county. Suggestions and proposals concerning these will be made later in this study.

THE RURAL SCHOOLS.

There are in the county 31 schools, in as many school districts, where no supervising principal is employed. These 31 schools are in the hands of 43 teachers, among whom is one man.

The remaining 30 schools are taught by 42 women teachers, wholly without supervision, except such as the county superintendent can give in his yearly visit. The following table shows the number of teachers in these schools:

1 school employs	6 teachers,
1 school employs	3 teachers,
6 schools employ	2 teachers,
23 schools employ	1 teacher,
31 schools employ	43 teachers.

It is in these 31 unsupervised schools that the urgent need of county reorganization is seen. Each school is a unit in itself, under the present system. Each must adopt, as best can be done, the county course of study; but local conditions, and the common necessity of one teacher having a whole school of eight grades under her care, cause wide variation in the use of even this very important part of the system.

It must be stated, in all fairness, that the rural one-teacher schools in San Mateo County are not below the average schools of the same kind in other counties; on the contrary, there are many commendable features in this county which are not found elsewhere. The chief fault lies not with the present schools and their teachers, but with an inherited and outworn system which permits of such unequal educational advantages as does the district system.

It is inconceivable that in any American city there should exist 31 schools, 23 of which were supplied with but one teacher each, without supervision other than an occasional visit of a school official.

Many of the buildings in use by the one-teacher schools are in bad condition and should be condemned. Four of these buildings were erected in 1870, and seven are more than 30 years old. Being of the old type, they are poorly constructed. Several of them are old dwellings which were purchased by the district trustees for school purposes. Needless to say, they are insanitary, poorly lighted and ventilated, and difficult to keep at the right temperature.

Better buildings, of course, are found in districts where more money can be secured and where two or three teachers are employed. The new building at Menlo Park, for example, is quite modern and up to date, considering that but two teachers are as yet provided for; while the Ravenswood school, in another district and at a distance of less than 1½ miles, is unable to provide a janitor. By consolidation all the children of both of these districts could be cared for at even less expense than both districts are under.

Three of the rural districts, after repeated efforts, have been unable to vote bonds for the erection of school buildings and consequently have none. At Hillsborough, school is kept in a room in the "city hall," and the Tobin and the Laguna schools are maintained in old houses rented for that purpose by the trustees.

In the Alpine, West Union, and Visitacion school districts the buildings are unfit for school purposes and should be abandoned at once. This is also true in the La Honda district. In all four cases efforts to vote bonds have failed.

There are several examples of modern buildings, however, and the people of these districts should be commended upon having secured them. The Las Lomitas school is an exceptionally well-constructed building for a rural district. The school at Lomita Park is another in this class. In these cases the accomplishments have been made either through the unusual pressure brought about by public-spirited citizens or because the community was able to tax itself to the extent necessary. But their poorer neighbors in the hills in smaller communities are forced to continue as best they can, using in some cases a building for school purposes in which they themselves would not care to live.

It is for these children, who lack many other advantages as well, that the appeal is made for the equalization of the burden, not to rob any community of its opportunities, but to put the same opportunities within the reach of all the children in the county.

Janitor work is provided for by some districts by expenditures amounting to $5 to $10 per month. Usually this is undertaken by one of the older pupils of the school, and it is doubtful, often, if the results justify the expenditure. In some cases the teacher is required to do this work, and it is often neglected.

The economy idea in modern sanitation has not as yet found its way into many schools. Feather dusters, straw brooms, and tin water buckets abound in the smaller schools, and in one case, individual drinking cups, of all sorts and shapes, provided by the pupils, were kept on a shelf where the circular imprint of each was left in the coating of dust. This same school was found to have huge cracks and openings in the walls and ceilings, from which pieces of plaster fall from time to time. The stairway and upper rooms of this building, not being used at present, are littered with dirt, trash, and plaster; and upon entering the building one recognizes the familiar odor of an old house which has been vacated and neglected for years.

These conditions, and others which might be described, have arisen wholly on account of the lack of supervision. They are a result of the district system. That boards of rural school trustees, with the right to complete independence, should sometimes fail, either through carelessness or ignorance, to provide a comfortable and healthful school for the children of the community is only natural and to be expected under this form of school organization and management.

At nearly all of the rural schools questionnaires have been presented to the pupils, and a great deal of information secured concerning their home, school, and community life. Space will not permit of the details of this portion of the survey, or of all the conclusions to be drawn from the facts disclosed. Some features will, however, be summarized.

The questionnaire was divided into three parts; one was sent to the teacher, one to the parents, and one was filled by the children of each of the schools.

The blank filled by the teacher gave information concerning the mechanism of the school, the application of the course of study, etc. The blank returned by the parents—several in each district—brought information concerning the size and location of farms, the kinds of crops, the condition of the roads, the newspapers and magazines read, and the opinion of the patrons regarding the work of the school.

The questions answered by the children (in nearly every case under the personal supervision of the investigator) brought interesting facts concerning the economic and social advantages, as the children saw them, of their school and community; their home life, their likes and dislikes of country life, part of their store of information acquired through observation and home instruction, their favorite games, pets, etc., and their plans for the future.

Any one of the 30 or 40 questions asked would make a story in itself, and would be a decided contribution to the work of those who were trying to make the school count for the greatest degree of efficiency. The following data, including the answers to but a few of the questions and covering but half the older children of a single district, indicate in a small way the nature of the survey and its value when tabulated:

Children's answers to questionnaire.

No.	Age.	What work do you do at home?	What do you buy with your money?	Do you put money in a toy bank?	In the real bank?	What books do you like best?	What are you going to be when grown?
1	11			Yes	No	Story	
2[1]	12	Milking	Candy	No	Yes	Henty	Engineer.
3	13	Cooking	do	Yes	No	Story	Milliner.
4[1]	14	Plowing	Clothes	No	Yes	Alger	Workman.
5	16	Housework	do	No	No	Atlas	Nurse.
6[1]	14	Milking	Candy	Yes	No		Cowboy.
7	15	Housework	Clothes	Yes	No	Alcott	Teacher.

[1] Boy.

In this school it was found that the children were familiar with nearly all the trees, wild birds, and wild flowers in the community;

that but four of the children had neighbors near enough to play with; that they all liked to live in the country; and that in the school there were children who could play the piano, organ, guitar, banjo, harmonica, violin, and cornet.

In reply to the question, What do you expect to be when you are grown? it was found that every one of the older pupils had something definite in view. It further developed that 9 of the 12 older pupils expected to go to high school and to college if it were possible to do so.

III. THE COURSE OF STUDY.

The present course of study for the elementary schools of the county is prescribed by the county board of education. In preparing a program the board is necessarily limited to one that will prepare for high-school subjects, one that can be used in all schools and yet be carried out by a teacher having eight grades in one room.

All schools in the county, whether having 1, 2, 6, or 20 teachers, are required to use the "uniform" course, which is printed and distributed by the county superintendent.

Course for the current year by subjects and grades.

Number work	All grades.
Mental arithmetic	Grades 7, 8.
Geography	Grades 3, 4, 5, 6, 7, 8.
Physiology	Grades 4, 5, 6, 7, 8.
Spelling	All grades.
Word analysis	Grades 7, 8.
Reading	Grades 1, 2, 3, 4, 5, 6.
Literature	Grades 7, 8.
History	Grades 4, 5, 6, 7, 8.
Language	All grades.
Civics	Grades 7, 8.
Morals and manners	All grades.

The course also provides that the following subjects be given by schools where the work can be extended into the ninth grade: English, ancient history, algebra, bookkeeping or Latin, spelling, writing.

This course of study represents a serious attempt to meet the essential branches with the equipment at hand. Although it is lacking in science, agriculture, and domestic arts, it is a full program for any one teacher or for any two teachers having a complete school of eight grades. It is about all that can be managed under present conditions. With a consolidated system, these conditions will automatically cease, and a more modern course of study will be easily possible.

It would seem, however, even under the existing difficulties, that the county should recognize the need of agriculture as a part of the regular school work, even to the exclusion of some other subjects. Some of the more wide-awake teachers are now conducting school gardens, but for the most part the industrial and home subjects have been disregarded.

An interesting fact in connection with the course of study is that the assembled teachers of the county, at the yearly institute, are invited by the board of education to adopt, by two-thirds vote, any change they may desire. At one meeting of this nature the teachers voted to eliminate cube and square root from the prescribed course in arithmetic.

Progressive measures, however, which must wait for adoption in this way, are likely to be delayed for long periods of time. Sufficient authority should be vested in the superintendent of schools, as a modern educational expert, to make needed changes in any part of the course of study whenever he sees fit. The superintendent, with this authority given him, and with the support and cooperation of the teachers and the people of the county, could act in the same capacity as superintendents of city school systems, from whom most of the progress in curriculum making has come in the past 20 years.

IV. THE TEACHERS.

The teaching body in San Mateo County constitutes the most commendable part of the school system. With the few exceptions usually found in any city or county, the teachers are of a high order. The exceptions, furthermore, occur generally among those who have not had special training, but who have held positions either on old certificates or have secured certificates by virtue of having passed the county examinations.

Of the 130 teachers in the elementary schools, 81 are normal school graduates, 15 are university graduates, and 34 hold county certificates by examination. Chart 12 indicates the relative number in each group, expressed in per cents.

The county is to be commended upon the fact that nearly three-fourths of the teachers are graduates from professional schools, and especially that university graduates are secured by several schools. The number of professionally trained teachers is constantly increasing, and the examination requirements are made more rigid each year. This insures a continuance of the high standards of qualification for teaching positions.

In general great care has been taken in the selection and recommendation of teachers. An honest effort on the part of the people to secure efficient, well-trained teachers for their schools is an indication of a high degree of interest in the welfare of their children. This is to be recognized as an important factor in laying plans for better things in their school system.

The lowest salary paid to any regular teacher in San Mateo County is $700 per year. In the rural schools teachers receive from $750 to $900 per year. In the one-teacher schools the yearly salaries range as follows:

Salaries in one-teacher schools in San Mateo County.

1 teacher receives	$700	1 teacher receives	$850
10 teachers receive	750	2 teachers receive	900
4 teachers receive	800	1 teacher receives	930
2 teachers receive	840	2 teachers receive	960

The average salary of teachers in one-teacher schools is $879. This is higher than the average for all the elementary teachers in the county, including towns.

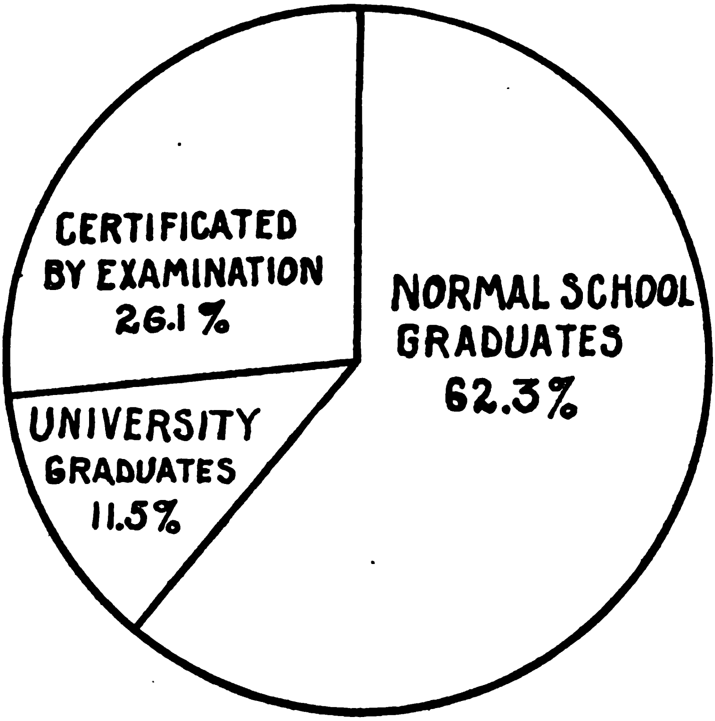


CHART 12.—Qualifications of teachers.

The teachers, on the whole, are found to manifest much interest in their work. It is a truly capable woman who can successfully manipulate a school of seven or eight full grades by herself. There is no other alternative, however, for many teachers than to face this problem, and in most cases the cause of failure to do this does not rest with her efforts.

A strenuous attempt is being made on the part of some of the teachers, even under the existing conditions, to make the school work count for something vital in the lives of the children. All over the county energetic teachers are using every means at hand to give something of a modern air to the school. In one school a group of the older pupils were studying the universities and colleges within a day's journey from their homes, and had collected pennants from several of these institutions to display on the walls of their schoolroom. The boys in this school were determined that they should go to college, and were glad to talk to their visitors from the university. One rural school was found to have a phonograph with records of the very best type. In another school the teacher, who is a university graduate, is developing a high degree of artistic ability in her school, using the latest models and methods. The apparatus for this, however, she provided at her own expense. This same teacher has also conducted open-air classes in the school yard.

A few teachers have induced their trustees to supply the school with sanitary drinking fountains and paper towels—things never before heard of in the district.

One teacher reported that she took a daily paper, two weekly papers, and seven monthly magazines, four of which were professional education journals. This teacher was keeping school in an old, worn-out building, which was kept, nevertheless, clean and neat, and in a district which furnished but 10 pupils—4 of them her own children. Another energetic teacher was giving extra time in teaching algebra and bookkeeping to boys who were anxious to remain in school near their homes. Such examples as this, and many others which could be cited, indicate favorable conditions for progress. Needless to say, these teachers were only too glad to have the survey made, and willingly gave all the information they could.

In another school the investigators found an old, dilapidated building, poorly kept and untidy, where the teacher eyed the inquiry blanks with suspicion and asked if it were compulsory to answer the questions, as she did not like to do things which were unnecessary. One teacher was conducting a reading class, with the children enthusiastic and quick to respond, while her neighbor in the adjoining district was found dragging over the same lessons, which were a burden to the pupils and herself and a waste of time to the school.

The great need among the teachers of the rural schools is the better type of supervision that consolidation will bring. This is evidenced by the fact that many of the better teachers have expressed this view themselves. To be crowded into a small, isolated district, where new buildings and better equipment is almost an impossibility, is to cheat an energetic and live teacher of her rights as a public official.

Better things can never be expected to any marked degree of efficiency under the district system. When the district lines are removed, the small one-teacher schools abolished, and the entire county operates as a single unit for equal educational advantages, the people of the country will not have to look to the towns for good schools; there will be in the mountains, as well as along the level shore line, substantial, healthful, well-supervised schools; and competition with the urban schools will be only a matter of individual differences among the pupils themselves.

V. SUMMARY OF THE INVESTIGATION.

1. San Mateo County is well located for future development of economic importance.
2. This development will be largely in the lines of agriculture and manufacturing.
3. Future agricultural development is assured by recent progress and by the amount of improvement of lands not now in farms.
4. The population is rapidly increasing, with indication of much further increase.
5. The population is of a cosmopolitan nature; there are 15 nations represented to an appreciable extent.
6. In the amount of illiteracy the county ranks among the lower grade of counties in the State; 1,684 persons, or 7.8 per cent of the population above 10 years of age, can not read and write.
7. The county is strictly a rural community, leading all other counties in the State in rural population per square mile.
8. The "district system" of public education has worked here, as in most places, to the detriment of educational progress.
9. Many districts have been able, under local conditions, to maintain good schools, and their work is to be commended.
10. Other districts have been forced to yield to financial difficulties, and the schools have suffered for lack of much-needed attention.
11. The present course of study has been carefully prepared, and much effort has been made to carry it into effect; but it is not in accord with the needs of a rural county.
12. There are in the county three excellent consolidated high schools, whose work compares favorably with others of equal size in the State.
13. The teachers are well selected and well paid; on the whole, they are rendering quite efficient service.
14. The county is a unit for all purposes except for education, and much good has resulted in these other lines by the use of the larger unit.
15. A unified system of public schools, with equal opportunities to all the children of the county and the proper management of educational affairs, can be secured only by abolishing the districts and establishing the county unit plan.

Las Lomitas District School.

Bell District School.

La Honda District School.

Millbrae District School.

West Union District School.

TYPICAL SCHOOLS OF SAN MATEO COUNTY.

Chapter III.

THE PROPOSED EDUCATIONAL REORGANIZATION.

I. ORGANIZATION AND ADMINISTRATION.

On the basis of the foregoing list of findings and other facts disclosed by the survey it is proposed to outline a plan for reorganizing the school system of San Mateo County to meet the needs of the county as a whole, and to make it in harmony with the present economic and social conditions of this larger community.

It is proposed, therefore, to submit a working plan, in which the county shall be the unit, all district lines now existing to be obliterated, and in which all educational authority shall be vested in a board of education, elected by the people of the county. This board shall then select the officials and experts needed, fix their salaries, and be responsible to the people for maintaining an efficient school system. It is further proposed that taxes for educational purposes shall be levied by this board, and funds shall be distributed among the schools according to their respective needs, regardless of whether it is located in a wealthy or a poor community.

It must, however, be said at the outset, that such a reorganization is not as yet possible under the school laws of California, which still authorize the district system. The law also makes the county superintendent of schools a political officeholder, subject to the campaigning process, and few of the capable men in education will seek the position under these conditions.

The following plan is suggested, therefore, as having been formulated upon the basis of a careful study of the possibilities of one county in this direction.

BOARD OF EDUCATION.

I. The educational affairs of the county shall be delegated to a board of education consisting of five members, none of whom shall hold any educational position during their term of office; they shall be elected by the people of the county at elections held for that purpose only, each member to serve for a term of five years; and they shall serve without compensation, except for traveling expenses incurred when acting for the county.

It will be seen that these recommendations follow closely the plan adopted by most American cities. Leading educators agree that for purposes of administration of schools there should be little difference in the organization of cities and counties.

The proposal that the members shall hold no other educational position is made in order that men may be secured who are interested in education in its broadest sense; who are sound, practical business men or farmers; and who, by experience and several years of residence in the county, are familiar with its conditions and needs. Such persons will best represent the people by whom they are elected, and their sound business judgment will be a valuable asset to the educational system.

The members are required to serve without pay, so that only public-spirited citizens, well established in the county, who have the best interests of the county at heart, may be eligible. This will be a position open only to this type of men and women.

It is expected that one member should be elected each year. This will prevent any sudden upheaval, such as might be produced if several members came into office at the same time, and will still permit a group of members to work together for a sufficient period to assure uniform management.

II. The board of education shall be responsible to the people of the county for a well-established and efficiently conducted system of schools and shall have the following powers:

1. To appoint a superintendent of schools, selecting him from any part of this or any other State; to fix his salary and prescribe duties and powers not herein delegated to him.
2. To appoint for each school a board of local trustees consisting of three members of the community.
3. To levy taxes for school purposes and to apportion the same to all parts of the county on an equitable basis.
4. To appoint principals of all schools and to secure such other officers, experts, clerks, etc., which may be necessary to a modern system of public schools.
5. To locate all schools and to erect buildings wherever needed.
6. To perform all duties and exercise all authority usually devolving upon boards of education in cities and towns.
7. To prescribe a course of study prepared by the experts whom they shall appoint; said course of study to be of sufficient flexibility that the needs of all communities will be served.
8. To consolidate schools; to cause any school to be abandoned; and to provide means of transportation for pupils from their homes to the school.
9. To act as a final deciding body for the county upon all questions which may arise involving the system of schools under their jurisdiction, with appeal from their decisions only to the State superintendent of public instruction.

The people of the county having once elected and placed their confidence in the board of education, with these powers and duties, would be able to secure a business administration, free from petty politics and the intrusions of local interests.

THE SUPERINTENDENT OF SCHOOLS.

III. The superintendent of schools shall be appointed by the board of education for an indefinite term, and he shall continue in office until his resignation, or until his removal by the board upon written charges, or for incapacity to continue further the fulfillment of his duties.

He shall be ex officio secretary of the board of education, meeting with them and advising them in matters under their jurisdiction, with power to speak upon any subject, but shall not be privileged to vote.

IV. It shall be the duty of the superintendent of schools:

1. To superintend the schools of the county.
2. To act as secretary of the board of education.
3. To act as the agent of the State in the examination for teaching certificates.
4. To prepare, and furnish for the approval of the board of education, a course of study for the schools.
5. To prepare the forms, blanks, etc., necessary to carry on the work of his office.
6. To call and conduct institutes and teachers' meetings.
7. To recommend persons to be appointed principals by the board of education, and to submit lists of teachers to the boards of local trustees.
8. To recommend the appointment or the dismissal of any principal or teacher.

It is to be fully understood that the superintendent of schools is to be given sufficient authority to perform properly the duties delegated to him as the chief executive of the educational system of the county. As the board of education is authorized to select the superintendent from this or any other State, it will naturally follow that he will be a capable man of broad experience and training, and should be given unlimited authority in matters requiring expert skill. The board is further authorized to pay a salary which will secure the best ability.

The superintendent should have under his direction a complete office force. There should be two assistant superintendents, one of whom should act as supervisor of the schools, and the other to manage the affairs of the office, preparing blanks, documents, meeting visitors, etc. Under the present system these matters take much of the superintendent's time from more important duties. There should also be one person to act as clerk and stenographer.

This will leave the superintendent free to attend to the larger duties of administration, to represent officially the board of education, and to see that the functions of his office are properly performed.

The superintendent is given power to recommend and dismiss teachers and principals and thus to secure for the county the best instruction obtainable. The competent, well-selected body of teachers which would result from this provision would alone be worth to the county many times the money expended in employing an able executive.

It is recommended that a salary of not less than $3,500 per year be paid to the superintendent.

BOARDS OF LOCAL TRUSTEES.

V. The board of education shall appoint for each school in the county a board of local trustees consisting of three members, each of whom shall be a resident of the community served by the school, and shall serve three years, one member retiring each year.

It shall be the duty of the board of local trustees to care for all buildings, lands, and property intended for school purposes and to make needed repairs, after first notifying and receiving the approval of the board of education through the superintendent of schools; and they shall be responsible to the county for the property under their care.

They shall appoint janitors upon the recommendation of the principal of the school and shall provide all improvements necessary to keep the buildings and grounds in the order prescribed by the board of education.

The principal of each school shall be ex officio secretary of the board of local trustees for his school and shall meet with them and advise them, but shall not have a vote, if that method of decision should at any time become necessary.

The members of the boards of local trustees shall serve without pay and shall be subject to dismissal by the board of education only upon written charges.

The board of education shall pay all expenses incurred by the boards of local trustees in performing their duties.

The boards of local trustees shall, upon the recommendation of the principal, appoint all teachers and assistants necessary to the school under their care: *Provided*, That no teacher or assistant be appointed or dismissed by them except with the approval of the board of education through the superintendent of schools.

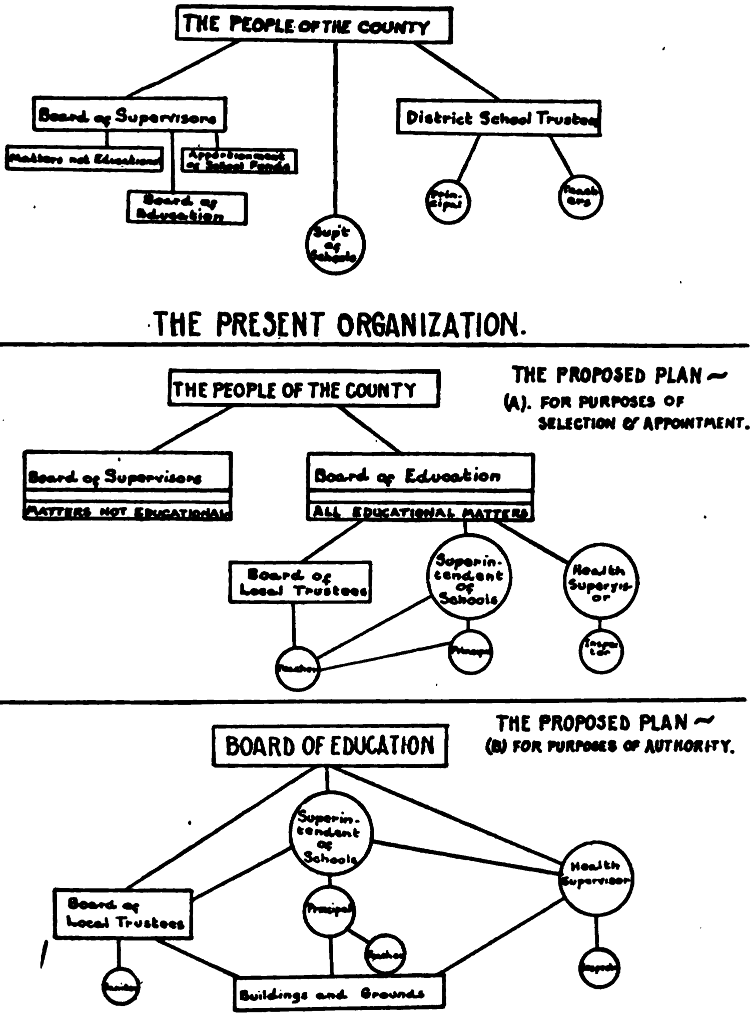
The proposal to authorize a board of local trustees for each school is in no way to be construed to mean the segregation of each school into a district or definite community. There are to be no district lines other than the attendance lines which may need to be drawn between certain schools, and the plan of consolidation of schools to be proposed will permit only 13 such boards to be appointed.

This plan has been in use in the counties of Maryland, and has been shown to be of very practical value. This is especially true of Baltimore County, which does not include the City of Baltimore and which is strictly a rural community, much the same as San Mateo County.

BOARDS OF LOCAL TRUSTEES IN TOWNS.

VI. In any incorporated town or city having two or more schools the board of local trustees shall consist of five members, appointed in the same manner and exercising the same authority as boards of local trustees herein provided for one school, except that they shall have under their care all schools, both elementary and secondary, within the limits of the incorporated town or city which they represent; and the superintendent of schools shall select one principal to act as secretary of the said board of local trustees under the same provisions made for one school.

In order to prevent the organization of two or more boards of local trustees in any town, such as exist now for high schools and elementary schools in Redwood City, San Mateo, and Halfmoon Bay, one board of five members is provided for. This board would have jurisdiction over all the schools in the town, and thus there would be no segregation of the high schools from the elementary schools, as at present.



THE PRESENT ORGANIZATION.

THE PROPOSED PLAN ~ (A). FOR PURPOSES OF SELECTION & APPOINTMENT.

THE PROPOSED PLAN ~ (B) FOR PURPOSES OF AUTHORITY.

CHART 18.

The boards of local trustees, it will be seen, are not granted *educational* authority. They are authorized to care for buildings, grounds, and school property belonging to the county, and to appoint teachers recommended by the principals and the superintendent. Matters requiring expert ability are to be acted upon by persons appointed and paid for that purpose. Thus the people of each community are to be assured of skilled and competent persons in authority, and important matters are not subjected to manipulation by some local politician, or an inefficient school board, such as are often in power under the present district system.

COUNTY HEALTH SUPERVISOR.

It is further recommended that the board of education appoint a county health supervisor. There is already provided by the county a health officer, and this position could easily be combined with that of health supervisor, who would act as medical inspector for all the schools of the county. He should provide and direct health examinations of pupils and teachers, and a regular system of inspection of school buildings and premises. He should declare and lift quarantines on schools, pupils, homes, or neighborhoods, and should be responsible to the board of education, through the superintendent of schools, for the sanitation of buildings and grounds, and for the proper care and treatment of all physically defective children.

II. THE PROPOSED SYSTEM OF CONSOLIDATION.

The proposed plan of consolidating the schools under the county-unit plan can best be shown by means of the maps prepared for this purpose. The map of the county on page 20 shows the present system and the number of small schools it sanctions. The county is divided into 36 small districts, each of these having its board of trustees, who erect buildings, employ teachers, and maintain school wholly independent of the other 35 districts. The map on the following page shows the schools as they would be under the plan suggested by this study, with fewer, larger, and better schools located at the most convenient points.

The proposals for the reorganization will be of two kinds: First, to make use of present well-organized school centers, and by enlarging their equipment bring in children from adjoining communities, and leave them practically as they are; second, to erect new schools at favorable and convenient points, abolishing all other schools. In both cases, children living at a distance from the school are to be transported free of charge from their homes to the school and back to their homes each day.

OLD SCHOOLS TO BE USED.

There are seven points at which consolidation may take place by enlarging the schools at places now provided with good schools. These will be taken up individually, their present equipment briefly described, and suggestions made for enlargement.

It is proposed to consolidate all the schools of the county, without district lines, into 13 school centers, each with a supervising principal, and no school with less than four teachers.

The following are the present schools to be enlarged:

1. *South San Francisco.* Large school with principal and 11 teachers. High school with three teachers. A new high-school building needed, and children should be brought from the present visitation district. One wagon or automobile bus necessary. Electric car lines may be used.

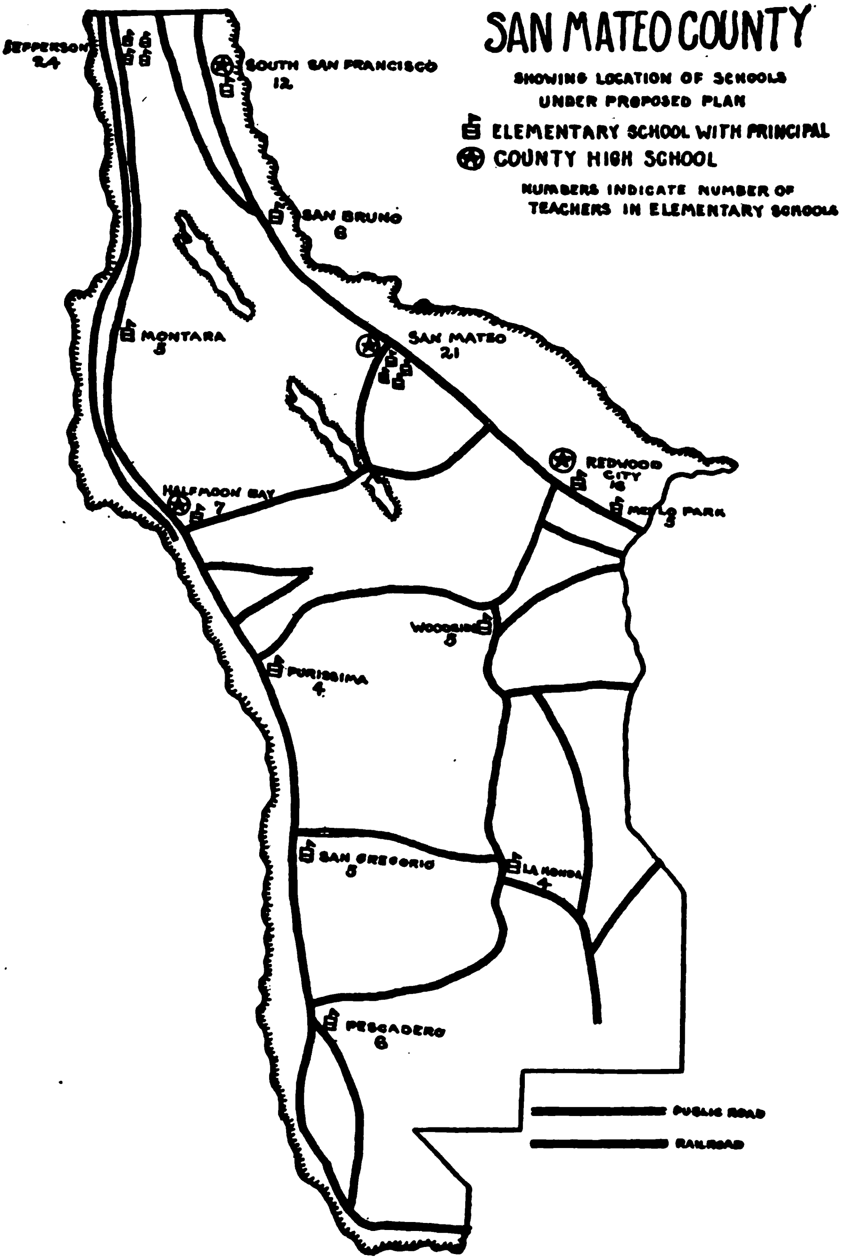


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CHART 14.

2. *San Bruno.* Has at present a principal and 5 teachers. School should be enlarged to accommodate children from Lomita Park and part of Millbrae districts. Possibly one wagon needed. Electric line may be used. No more teachers necessary.

3. *San Mateo.* Has 4 elementary schools with supervising principal. Has 20 elementary teachers and 3 special supervisors. Should accommodate pupils within present district, which is sufficient territory. The Burlingame school should become part of the system. One transportation automobile is now in use at Burlingame and should be continued as at present. Another should be run from San Andreas Lake to bring children from the Laguna and Hillsborough districts.

The high school in San Mateo is in excellent condition and should be maintained as at present, except that means of transportation should be provided to bring more children from the rural communities.

4. *Redwood City.* Large elementary school with supervising principal and 15 teachers. Should accommodate children from Belmont and West Union districts. Probably two wagons will be necessary. An addition to the present building or a new building required. Union high school here in good condition. Has principal and 7 teachers. Should transport pupils from country and encourage larger attendance.

5. *Menlo Park.* New school building just completed. Has 3 rooms and 2 teachers. Could easily be arranged to have 4 rooms, 4 teachers, and a principal. Should accommodate children from Las Lomitas and Ravenswood districts. One automobile bus would be sufficient.

6. *Half Moon Bay.* Elementary school with principal and 4 teachers; should be enlarged, 2 more teachers added, and should accommodate children from Mirimar, Philarcitos, Laguna, and part of Higgins districts. This could be made a fine example of a consolidated elementary school. Some provision is now being made for transportation. Three automobile busses or wagons required.

Union high school here has principal and 4 teachers. Present building may need addition. Should be commended for the large per cent of rural children now enrolled.

7. *Jefferson.* Has supervising principal, 4 schools, and 23 teachers. Splendid system, well supervised. Should accommodate children from San Pedro district. One bus required. Several San Francisco high schools are within 20 minutes' ride on electric cars, and children should be encouraged to attend these, county paying car fare.

NEW CONSOLIDATED SCHOOLS NEEDED.

The remaining six of the schools are to be entirely reorganized. The following is a description of the new consolidated schools:

1. *Woodside* (Greersburg district). Here a new school should be built to accommodate all the children in the vicinity of Woodside and the Portola Valley. Possibly location should be somewhat changed, but should be near Woodside. Should have a principal and 4 teachers. Two wagons or automobile busses required. Estimated cost of new building, $25,000.

2. *La Honda.* A new school should be built to accommodate children of La Honda, Wurr, Bell, and Alpine districts. Principal and 3 teachers. Three wagons or automobile busses required. This is a splendid location for a future large consolidated rural school, and should prove to be one of the most attractive places in the county for a rural educational center. Would increase the value and attractiveness of property. Estimated cost of building, $20,000.

3. *Pescadero.* New building should accommodate children of Pescadero, Pigeon Point, Sunnyside, and Pomponio districts. Principal and 5 teachers. Four wagons required. Estimated cost of building, $25,000.

4. *San Gregorio* (Seaside district). Should accommodate children of Seaside, San Gregorio, and Tunis districts. Principal and 4 teachers. Two wagons or busses necessary. Estimated cost of building, $20,000.

5. *Purissima.* Children of Purissima and part of Higgins districts. Would be small to start with, but would increase in attendance. Principal and 3 teachers. One wagon or automobile required. Cost of building, $15,000.

6. *Montara.* New building to accommodate children from Montara, Tobin, Mirimar, and part of Millbrae districts. Transportation largely on Ocean Shore Railway. One wagon required. Principal and 4 teachers. Cost of building, $25,000.

Summary of proposed consolidated schools.

Location.	Probable enrollment.	Teachers and principals.	Wagons or busses.	Proposed change.	Cost of building.
South San Francisco	468	12	1	Addition	$2,000
San Bruno	264	6	1	None	
San Mateo	1,340	21	1	do.	
Redwood City	496	16	2	Addition	5,000
Menlo Park	109	5	2	do.	5,000
Half Moon Bay	223	7	3	do.	5,000
Jefferson	924	24	1	None	
Woodside	100	5	2	New building	25,000
La Honda	40	4	3	do.	20,000
Pescadero	176	6	4	do.	25,000
San Gregorio	65	5	2	do.	20,000
Purissima	30	4	1	do.	15,000
Montara	112	5	1	do.	25,000
Total	4,347	120	24		147,000

III. THE COST OF THE PROPOSED SYSTEM.

The total expenditure for elementary education in the county during the year 1912–13 was $218,098.50. This was distributed as follows:

Salaries of 130 teachers	$107,334.75
Salaries of 6 principals	11,100.00
Janitors, supplies, etc	45,085.19
Buildings and sites	52,461.62
Library books	2,116.94
Total	218,098.50

Each of these items will be taken separately for purposes of comparison with the proposed system.

SALARIES.

It will be seen that the greater portion of the expenditure for the elementary schools is for teachers' and principals' salaries. It will also be seen by the table on page 42 that the proposed system has increased the number of principals from 6 to 13, and has decreased the number of teachers from 130 to 107. The following table compares the two systems in the expenditure for salaries:

Under present system:		
Salaries of 130 teachers (average $825)	$107,334	
Salaries of 6 principals (see preceding table)	11,100	
Total		$118,434
Under proposed plan:		
Salaries of 107 teachers (average $825)	88,275	
Salaries of 6 principals above	11,100	
Salaries of 7 additional principals (average $1,500)	10,500	
Total		109,875
Saving annually by proposed plan		8,559

JANITORS AND SUPPLIES.

The present expenditure for janitors in most schools is insufficient, and the poor service resulting from this has been pointed out in the survey of the rural schools. The janitor is said to be, next to the principal, the most important officer in the school. To secure good service, and to insure healthful and sanitary conditions, requires an expenditure, which, when well directed, is the very essence of economy. To employ one of the older boys in the school to build the fires and occasionally sweep out, while much more humane than leaving the burden with an overworked teacher, is a bad investment for the community.

The proposed system will require the services of 20 janitors, and it is proposed that they be paid an average salary of $800 per year. Each will, of course, be under the supervision of a principal.

The amount now expended for supplies is not kept in a separate account, and the exact sum is not known. Nevertheless it is small and is divided among 36 school districts. It is assumed that $1,000 for each school per year will be an ample average. This is to be distributed by the superintendent of schools according to the needs of each school.

Expenditure for janitors and supplies:		
Present expenditure		$45,085
Proposed expenditure—		
20 janitors, at $800	$16,000	
Supplies, at $1,000 per school	13,000	
Total		29,000

BUILDINGS AND SITES.

The expenditures for buildings and sites for elementary schools in the county for the past eight years are given in the following table:

1906–7	$35,269	1910–11	$85,987
1907–8	36,386	1911–12	25,408
1908–9	41,216	1912–13	52,461
1909–10	36,938	1913–14 (to date)	101,500

This gives an average annual expenditure, since 1906, of approximately $52,000 for this purpose. The amount will probably be greatly increased during the next few years, as many of the old district buildings must be replaced.

It will be fair to assume, then, for purposes of comparison, that during the next 10 years the expenditure for buildings and sites will be at least equal to the average above and will be not less than $520,000 during the decade.

The proposed plan, as outlined in Section II, calls for six new buildings and additions to present buildings, involving an expenditure of $147,000. During the 10 years these buildings would need practically no change or repair. There would, however, need to be a few new buildings and additions, owing to the increased population. Allowing for these the sum of $200,000, without considering the increased value of property, which would permit of even larger expenditure, there is still a saving to the county:

Under present system:		
Expenditure for 10 years (average, $52,000)		$520,000
Under proposed plan:		
Cost of six new buildings	$130,000	
Cost of new additions	17,000	
New buildings during 10 years	200,000	
Proposed expenditure for 10 years		347,000
Saving the county		173,000

TRANSPORTATION OF PUPILS.

This is the greatest item of continuous expense in the proposed plan. As has already been shown, the securing of the right educational opportunities for all the children of the county will necessitate, instead of one small school in each small community, the enlargement of communities and the provision for each of a large, well-equipped school with a principal and several teachers.

Since these schools can not be within walking distance from all the homes they will serve, it is proposed that all children living at a greater distance be given means of transportation, free of all charge to themselves or their parents.

Free transportation of pupils to and from schools has been clearly demonstrated in various parts of the United States to be the means by which a practical, economical, and modern solution of one of the greatest rural problems may be provided.

There are several methods in use in different parts of the United States for the transportation of pupils. In Illinois a common plan is for the school to employ some one in the community to carry the pupils in a vehicle provided by himself and pay him at a certain rate per day, per hour, or per pupil. It requires of his time from two to four hours per day, and he is paid from $1.50 to $2 for each day he renders service. He is free to do any work he may wish to do for the remainder of each day.

In some places pupils secure commutation tickets on railroads or trolley lines. This method is now in use by pupils of the union high schools at Half Moon Bay and Redwood City. The cost of this for pupils living at the greatest distance from the school is $2.80 per month, or about 14 cents per day.

In Imperial County, Cal., one consolidated school has arranged with an enterprising young man who owns an autotruck to carry the pupils to and from the school at 15 cents per day per pupil. He received last year about $100 per month from the school and had the use of his machine for the remainder of the day and on Saturdays for carrying freight, delivering milk, etc. He received a very substantial income from his investment, increased the attendance of the school, and set up a means of travel in the community which was beneficial in many other ways.

In Ohio, Indiana, and other States the county or township purchases and maintains wagons or automobiles for transportation and other school purposes. The investment once made, the cost for upkeep is small in proportion to the amount of service rendered. These vehicles can be used for hauling, and are often a paying investment for the school rather than a burden of expense. A good, wide-awake principal, with an interested and enthusiastic group of farmers' boys, can easily make the expenditure worth while in many ways.[1]

There will be proposed three definite ways by which San Mateo County might furnish transportation for pupils under the plan of consolidation:

Plan I. Under this plan the county will allow to each school the sum of 15 cents per pupil per day, and each principal will be authorized to secure transportation for the pupils in any available way; 15 cents per day is a common average, and permits of either employing a driver with his own vehicle or of railroad or electric car transportation. This amount will be sufficient to pay a driver $3 per day to carry 20 pupils or will buy commutation tickets for 24 pupils at $2.50 per month each. Local conditions would, no doubt, in many cases provide means yet more practical and economical.

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[1] For methods of consolidation see bulletin of the Bureau of Education, 1914, No. 30.

Plan II. The county shall employ men in the vicinity of each school to transport the pupils, each driver to receive not more than $3 per day. This will require the services of 24 men. The drivers are to be free during the entire day to do whatever they wish, but to be responsible to the superintendent of schools for carrying the pupils.

Plan III. The county under this plan would purchase 24 automobile busses to be distributed as proposed (p. 41). These should be purchased for approximately $2,000 each. Drivers should be employed by the county at an estimated cost of $50 per month each, and all expense of upkeep should be paid by the county.

The cost of each of these plans is shown by the following tables. This is on the basis of 502 pupils, as will be shown later.

ESTIMATED COSTS OF VARIOUS PLANS OF TRANSPORTATION.

Plan I:		
502 pupils at 15 cents per day	$75.30	
200 days (10 months) at $75.30		$15,060
Plan II:		
24 drivers at $3 each per day	$72.00	
200 days at $72		14,400
Plan III:		
24 automobile busses at $2,000 each, owned by the county	$48,000	
24 drivers at $50 per month (calculated for 10 months)	12,000	
Upkeep 24 machines at $30 per month	7,200	
Total cost per year, not including investment		19,200

The total annual cost, then, of each of the three plans is as follows: Plan I, $15,060; Plan II, $14,400; Plan III, $19,200.

Which of these plans should be adopted, or to what extent each should be used, would be a matter for the people of the county to decide. It is probable that under the proposed system of consolidation shown here all three methods would be in use in the county.

For purposes of estimating costs, etc., however, it will be assumed that the board of education would wish to purchase at least 10 autobusses under Plan III, and that the remainder of the transportation be brought about under Plans II and I.

It will be fair, then, to estimate the cost of transportation at $16,000 per year. Still there is no question but that the superintendent of schools and the principal, as well as the people of the community, could bring this cost down to a nominal figure.

The following table summarizes the probable status of transportation following out the proposed plans:

Transportation of pupils.

Schools.	Number of pupils to transport.	Number of wagons needed.	Other means of transportation.
South San Francisco	20	1	Electric railroad.
San Bruno	50	1	Railroad.
San Mateo	22	1	Do.
Redwood City	50	2	Do.
Menlo Park	40	2	
Half Moon	60	3	Do.
Jefferson	20	1	Do.
Woodside	40	2	
La Honda	40	3	
Pescadero	60	4	
San Gregorio	40	2	
Purissima	20	1	
Montara	40	1	Do.
Total	502	24	

It should be stated at this point that no pupil under the suggested plan will need to attend an elementary school at a distance of more than 6 miles from his home, and in all cases he is to be transported free by the county.

THE ABANDONED SCHOOLS.

The foregoing plan of consolidation permits of the abandonment of 23 schools, and would lead to the subsequent disposal of buildings and grounds. The following table summarizes this asset:

Disposal of buildings and grounds after consolidation of schools.

Names of schools.	Number of pupils.	Value of property.		Pupils would be transported to—
		Buildings.	Grounds.	
Alpine	10	$450	....	La Honda.
Bell	19	1,500	$300	Do.
Belmont	50	2,000	6,000	Redwood City.
Higgins	14	800	200	Purissima.
Hillsborough	22	0	0	San Mateo.
Laguna	10	0	500	San Mateo and Half Moon Bay.
Las Lomitas	20	3,100	1,200	Menlo Park.
Millbrae	30	1,000	1,500	San Mateo.
Lomita Park	50	5,000	1,500	San Bruno.
Mirimar	42	5,000	2,500	Half Moon Bay.
Pigeon Point	21	650	150	Pescadero.
Pilarcitos	21	500	200	Half Moon Bay.
Pomponio	20	700	100	Pescadero.
Portola	50	7,600	2,500	Woodside.
Ravenswood	13	1,600	900	Menlo Park.
San Gregorio	14	400	200	San Gregorio.
San Pedro	17	6,250	1,000	Jefferson.
Sunnyside	10	800	100	Pescadero.
Tobin	17	0	0	Montara.
Tunis	19	1,400	200	San Gregorio.
Visitacion	13	50	200	South San Francisco.
West Union	10	100	100	Redwood City.
Wurr	10	800	100	La Honda.
Total	502	39,700	19,450	

The figures for the value of buildings and grounds as given in this table are the official values of the buildings and grounds at present, as recorded in the county offices. The buildings, of course, could not be sold for the values here given; but it should be fair to estimate the immediate selling value of all buildings and grounds to be abandoned at $40,000.

The proposed system would cost, for maintenance, approximately $199,575 per year, as estimated in the foregoing pages. This may be summarized as follows:

Cost of maintenance of proposed system.

Salaries of teachers and principals	$109, 875
Salaries of janitors	16, 000
Transportation of pupils	16, 000
Supplies	20, 000
Library books (estimated)	3, 000
Buildings (one-tenth cost)	34, 700
Total annual cost	199, 575
Total annual cost of present system	218, 098
Annual saving of proposed system	18, 523

There remain yet to be purchased, however, on the basis of the plan adopted for transportation, 10 automobile busses at $2,000 each. This is an expenditure of $20,000. It seems certain that these could be easily provided by the county, when their salable abandoned property amounts to $40,000.

The office of superintendent of schools should, under the suggested plan, be maintained as at present by means of appropriations from the general fund of the county. But, inasmuch as increased expenditure is asked, it may be well to include the expense of administration in the cost of the system.

Annual saving of proposed system		$18, 523
Salary of superintendent	$3, 500	
Salary of deputy superintendent	2, 000	
Salary of assistant superintendent	1, 500	
Salary of clerk	800	
Total		7, 800
Net amount saved annually		10, 723

It has not been the purpose of this study to show a cheaper system than the present one or to urge its adoption because of less cost than the county now expends. To put education on a commercial basis and buy it at the lowest possible figure is not consistent with the American spirit of progress. The reorganization has been suggested as a means to better educational efficiency, and the cost of maintaining it is less than the present expenditure only because the money is more economically spent. The small, one-teacher schools and the drawing of narrow district lines about them is clearly as expensive as it is undemocratic and unjust.

The right kind of education for the children of San Mateo County or of any other locality can not be cheaply bought. It would be only to the economic and social welfare of the community if the expense of better schools were much greater than the present cost of their district system.

The writer herewith submits, after carefully considering all conditions and possibilities, the proposed system of consolidated schools for the people of San Mateo County. These are all to be modern, sanitary, well equipped, and beyond comparison with the present schools in efficiency and practical value. Yet the cost will be even less than the amount now expended.

IV. SUGGESTIONS CONCERNING HIGH SCHOOLS.

The map on page 23 shows the location of the present high schools. As has been said, the practical value of consolidation has been shown in these institutions, and all are doing commendable work.

It will be seen, however, that but three of the high schools are entirely organized, and that the southwestern and central portions of the county are not provided for. It can not be expected that children from these communities will come as far as Half Moon Bay or Redwood City to attend high school, and those institutions would not in any way be drawn upon if secondary school advantages were placed within reach of them.

The expense of this would of necessity be additional to the expenditure required for the elementary school system proposed, but the rural children who live in the southern part should not be deprived of equal high-school advantages with the children of the northern part because of the cost.

Suggestions have already been made concerning the attendance of high schools in San Francisco for the children of the northwestern portion of the county.

The following proposals are offered:

1. That all the present high schools and all others to be established be under the direction of the county board of education and the superintendent of schools as herein prescribed.

2. That the school at South San Francisco be made a complete four-year high school, and at least two additional teachers employed.

3. That a new four-year county high school be established at Pescadero.

4. That an intermediate school for the eighth, ninth, and tenth years be established in connection with the consolidated rural school proposed for La Honda.

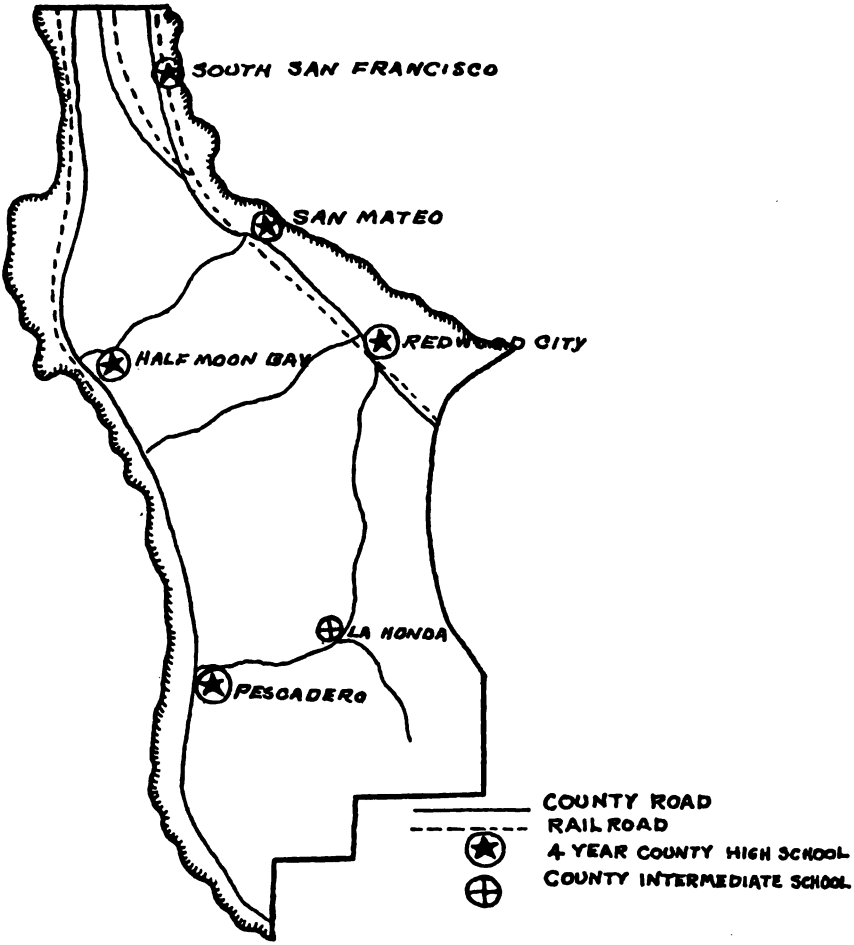

Chart 15.—Suggested plan for high schools.

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DEPARTMENT OF THE INTERIOR
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THE WISCONSIN COUNTY TRAINING SCHOOLS FOR TEACHERS IN RURAL SCHOOLS

BY

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THE WISCONSIN COUNTY TRAINING SCHOOLS FOR TEACHERS IN RURAL SCHOOLS.

HISTORICAL STATEMENT.

The movement in Wisconsin for the establishment of schools having for their special object the preparation of teachers for country schools began in the early nineties. There was considerable discussion of the matter during the following six or eight years, and finally, in 1899, a law was enacted by the legislature giving "the county board of supervisors of any county within which a State normal school is not located the authority to appropriate money for the organization, equipment, and maintenance of a county training school for teachers of the common schools."

The law of 1899 limited the number of training schools that might be established to two. All control of the school was placed in the hands of a county training school board consisting of three members, one of whom should be the county superintendent of schools, the other two elected by the county board for a term of three years. The State superintendent was given supervision over the schools and was required to prescribe the course of study and to determine the qualifications of the teachers. The school was to be maintained at least 10 months during the year, and the secretary of the training school board (the county superintendent) was required to make a report at the end of the school year, setting forth the facts relating to the cost of maintaining the school, the character of the work done, etc. Upon the receipt of this report the State superintendent was to make a certificate to the effect that the training school had been maintained according to law and to file such certificate with the secretary of state. A warrant was then drawn payable to the county treasurer "for a sum equal to one-half the amount actually expended for instruction in such school during the year, providing that the total amount so apportioned shall not exceed $2,500 in any year."

The first two counties to avail themselves of the opportunity of establishing a county training school were Marathon and Dunn. Schools were accordingly established at Wausau and Menomonie. At Wausau 56 students were enrolled during the school year 1899–1900 and 57 at Menomonie. During the school year 1900–1901 Menomonie enrolled 58 and Wausau 76. When the legislature met in 1901 the law of 1899 was amended so that six such schools might be organized in the State. A section was also added to the law providing for the certification of the graduates of the training schools.

In 1901 a training school was organized in Manitowoc County, and this was followed in 1902 by the organization of training schools in Waupaca, Buffalo, and Richland Counties, thus making the total of six schools authorized in the State.

The legislature of 1903 further increased the number of schools that might be established from six to eight. A provision was added in that year to make it possible for two counties to organize a training school jointly. A section was also added providing that nonresident students might attend and their tuition be paid by the counties in which they lived.

As soon as an opportunity was offered for establishing more training schools, Wood County made application, and a school was organized at Grand Rapids in 1903.

When the legislature met in 1905 the number of possible training schools was increased from 8 to 12, and an amendment was also made to the law providing that—

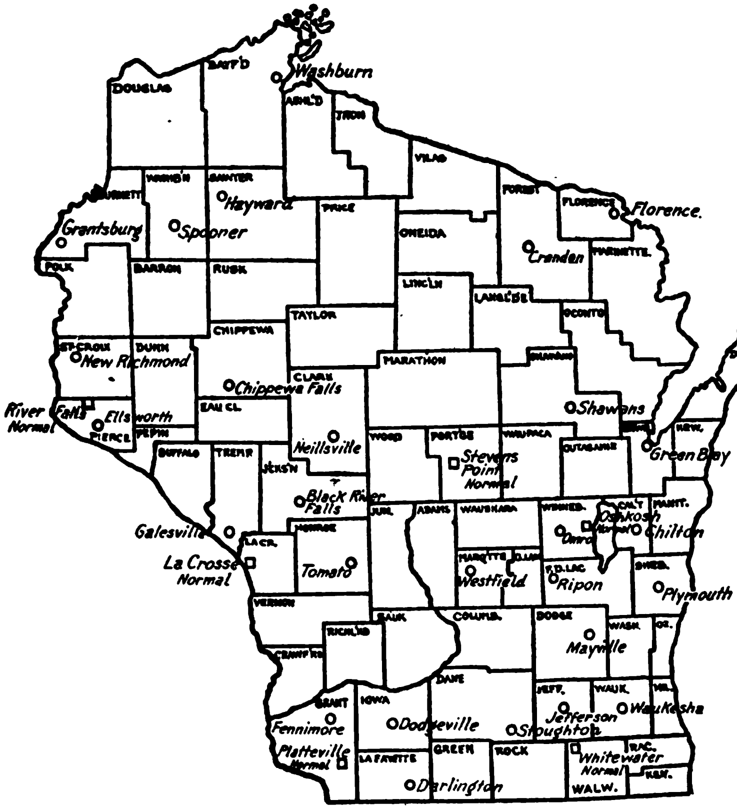
> the secretary of state shall draw his warrant, payable to the treasurer of the county maintaining such school, for a sum equal to two-thirds the amount actually expended for maintaining such school during the year, provided that the total amount so apportioned shall not exceed $3,500 in any one school year.

A provision was also added to the effect that, in case the graduate of a training school had never taught, he should be given a certificate having full force and effect for one year only from the date of issue. When this graduate furnishes evidence of at least one year of successful teaching the county superintendent will certify to that fact by signing the training school certificate, thus making it effective for two additional years.

In September, 1905, Eau Claire, Marinette, and Polk Counties established training schools. In 1906 Lincoln and Sauk Counties made application, thus completing the number authorized by the legislature.

The legislature of 1907 extended the number of training schools that might be organized from 12 to 20 and further provided legal qualifications for teachers in the county training schools. The provision made in this respect was that no person should be employed as a teacher in a training school who was not legally qualified for the position of principal of a free high school having a four-year course of study. This provision did not apply to teachers then engaged in the work. A further restriction was enacted providing that no member of any county training school board should be employed either as principal or as assistant during the term for which he was elected or appointed as a member of the board.

In 1907 four counties made application for the establishment of training schools, namely, Barron, Lincoln, Rusk, and Vernon. The following year Columbia, Crawford, and Waushara Counties established schools. In that year there was also established a joint training school by Door and Kewaunee Counties, at Algoma. Twenty schools were now in operation, and no other schools could be organized until the legislature had taken action.



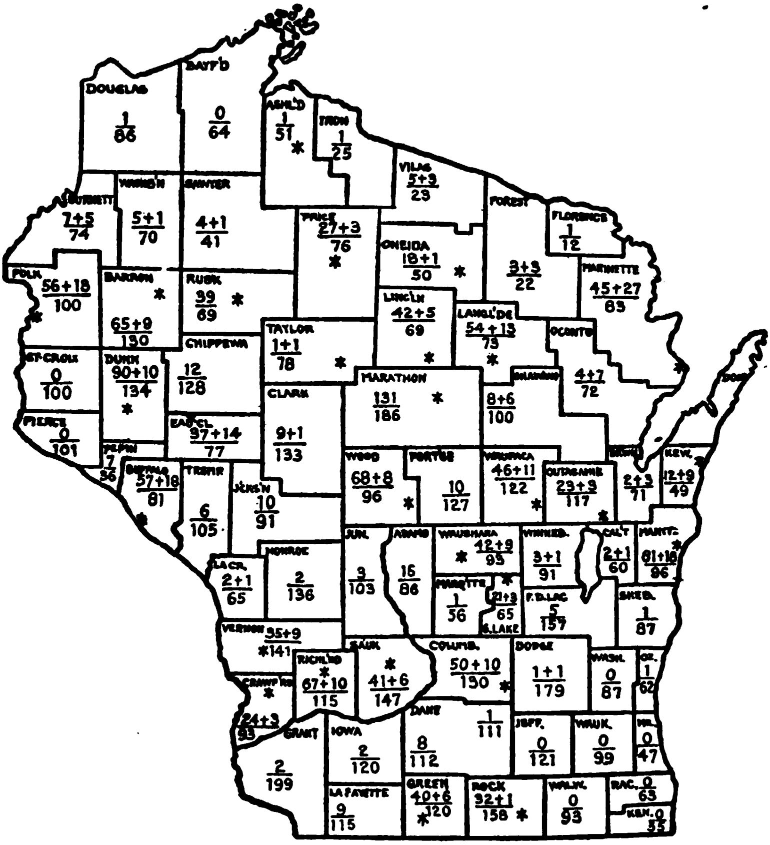
Map of Wisconsin showing the high schools having teachers' training courses and also the State normal schools having courses for the training of country teachers.
○ High schools. ☐ Normal schools.

The legislature of 1909 made a few minor modifications in the law providing for joint training schools and for the collection of tuition of nonresidents and increased the number of training schools that might be organized to 26. In the fall of the same year Green, Green Lake, and Price Counties opened training schools, and in 1910 Oneida County was added to the list.

In 1911 the legislature increased the possible number of training schools from 26 to 30 and amended the law in such a way that "a person who holds a State license or certificate may become an assistant in a training school."

Rock County established its training school in the fall of 1911, and Taylor and Outagamie Counties followed in 1912.

When the legislature met in 1913 the number of possible training schools was increased from 30 to 33. At present there are 28 schools in operation, Ashland County having established one in 1914.



Map of Wisconsin showing the distribution of training schools and training-school graduates throughout the State. The number below the line indicates the number of one-room country schools in the county; the first number above the line indicates the number of one-room country schools taught by training-school graduates; and the second number above the line indicates the number of graded positions held by training-school graduates. The stars indicate the location of the 28 training schools.

The legislature of 1913 also passed two other amendments. Regarding State aid for these schools, the law now provides that instead of paying "a sum equal to *two-thirds* the amount actually expended for maintaining such school during the year," the State pays—

> an amount equal to the sum expended for the wages of duly approved or qualified teachers in the school for at least 10 months during the school year, provided that a school employing two teachers shall not receive to exceed $3,000, and a school employing three or more teachers shall not receive to exceed $3,500 in any one school year.

The other changes relate to the matter of the training-school certificate.

In 1915 the basis of apportioning the State aid was changed from 10 months to 9 months. The schools now receive a sum equal to the amount spent for teachers' wages, limited to $3,000 for schools having two teachers and $4,000 for schools having three or more teachers. If schools are maintained more than 9 months, additional aid is granted. A special appropriation may also be secured under certain conditions in case a regular course in domestic science is adopted and a qualified teacher secured for the work.

In 1916 Racine and Juneau Counties voted to establish training schools. These begin their work in September, 1916, making the total number 30 for the State.

County training schools for teachers.[1]

Counties.	Location of school.	Established.	Principal.
Ashland	Mellen	1914	C. E. Hulten.
Barron	Rice Lake	1907	Grant E. Pratt.
Buffalo	Alma	1902	H. H. Liebenberg.
Columbia	Columbus	1908	S. M. Thomas.
Crawford	Gays Mills	1908	B. W. Weenink.
Door-Kewaunee	Algoma	1908	J. A. Eichinger.
Dunn	Menomonie	1899	G. L. Bowman.
Eau Claire	Eau Claire	1905	F. E. Jaastad.
Green	Monroe	1909	C. H. Dietz.
Green Lake	Berlin	1909	C. D. Lamberton.
Langlade	Antigo	1906	W. E. Switzer.
Lincoln	Merrill	1907	E. W. McCrary.
Manitowoc	Manitowoc	1901	Fred Christiansen.
Marathon	Wausau	1899	Randall Johnson.
Marinette	Marinette	1905	A. M. Olson.
Oneida	Rhinelander	1910	B. Mack Dresden.
Outagamie	South Kaukauna	1912	John E. Hale.
Polk	St. Croix Falls	1905	C. W. Monty.
Price	Phillips	1909	George R. Ray.
Richland	Richland Center	1902	L. C. Johnson.
Rock	Janesville	1911	Frank J. Lowth.
Rusk	Ladysmith	1907	R. H. Burns.
Sauk	Reedsburg	1906	W. E. Smith.
Taylor	Medford	1912	Jerome H. Wheelock.
Vernon	Viroqua	1907	A. E. Smith.
Waupaca	New London	1902	C. B. Stanley.
Waushara	Wautoma	1908	G. E. Dafoe.
Wood	Grand Rapids	1903	M. H. Jackson.

[1] Two new schools were established in 1916: Juneau County, New Lisbon, C. W. McNown, principal, and Racine County, Union Grove, A. J. Smith, principal.

Enrollment by years.

Counties.	1899-1900	1900-1901	1901-2	1902-3	1903-4	1904-5	1905-6	1906-7	1907-8	1908-9	1909-10	1910-11	1911-12	1912-13	1913-14
Barron	.....	.....	.....	.....	.....	.....	.....	.....	41	80	67	63	62	68	70
Buffalo	.....	.....	.....	49	56	43	40	36	43	42	44	46	48	50	49
Columbia	.....	.....	.....	.....	.....	.....	.....	.....	.....	33	52	[1] 260	47	62	51
Crawford	.....	.....	.....	.....	.....	.....	.....	.....	.....	31	37	24	37	36	34
Door-Kewaunee	.....	.....	.....	.....	.....	.....	.....	.....	.....	52	50	55	50	57	46
Dunn	57	58	80	81	74	100	95	80	89	88	92	86	86	86	77
Eau Claire	.....	.....	.....	.....	.....	.....	59	68	75	77	76	60	75	77	82
Green	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49	56	63	58	42
Green Lake	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	62	[2] 104	62	[2] 100	64

[1] Including enrollment at summer session.

[2] Including enrollment at the summer session. In Green Lake County the regular term began early, and a considerable number enrolled for the first six weeks.

Enrollment by years—Continued.

Counties.	1899–1900	1900–1901	1901–2	1902–3	1903–4	1904–5	1905–6	1906–7	1907–8	1908–9	1909–10	1910–11	1911–12	1912–13	1913–14
Langlade	....	....	....	....	....	....	....	48	46	50	42	43	42	39	42
Lincoln	....	....	....	....	....	....	....	....	74	57	72	63	54	38	33
Manitowoc	....	....	48	49	50	50	51	52	56	52	52	54	56	52	45
Marathon	56	76	36	70	69	71	64	80	72	71	71	73	61	83	85
Marinette	....	....	....	....	....	....	52	60	65	70	59	50	62	63	62
Oneida	....	....	....	....	....	....	....	....	....	....	....	25	57	62	52
Outagamie	....	....	....	....	....	....	....	....	....	....	....	....	....	31	42
Polk	....	....	....	....	....	....	38	43	38	51	49	36	41	41	47
Price	....	....	....	....	....	....	....	....	....	....	45	41	44	42	40
Richland	....	....	....	60	58	56	56	50	67	59	66	85	68	52	63
Rock	....	....	....	....	....	....	....	....	....	....	....	....	28	36	30
Rusk	....	....	....	....	....	....	....	....	45	45	42	38	52	37	45
Sauk	....	....	....	....	....	....	....	60	53	72	59	47	37	48	43
Taylor	....	....	....	....	....	....	....	....	....	....	....	....	....	28	39
Vernon	....	....	....	....	....	....	....	....	54	68	59	53	62	69	59
Waupaca	....	....	....	19	38	38	41	43	48	53	55	66	56	41	45
Waushara	....	....	....	....	....	....	....	....	....	23	29	39	44	43	37
Wood	....	....	....	....	51	53	55	55	61	71	79	86	96	80	89
Total[1]	113	134	164	328	396	411	551	675	927	1,145	1,308	1,553	1,390	1,479	1,413

[1] Total enrollment during the year 1914–15 for the 28 schools was 1,518.

Financial data.

County training schools.	Assessed valuation of county, 1914.	Total expenditures, 1913–14.	Salaries, 1913–14.		Per capita cost of instruction, 1913–14.	Teachers employed, 1913–14.	State apportionment, 1913.	County levy, 1913.	Number of nonresidents or tuition students, 1913–14.
			Principal.	Total to assistants.					
Barron	$25,240,753	$4,711	$1,850	$2,100	$56.43	3	$3,500	$1,700	10
Buffalo	19,500,044	5,689	1,800	2,150	80.61	3	2,950	1,850	3
Columbia	48,912,947	7,211	2,000	3,000	98.04	4	3,500	2,500	6
Crawford	15,761,609	3,125	1,800	850	77.94	2	2,800	500	2
Door	19,017,330	12,268	1,800	2,400	91.30	3	3,500	5,550	3
Kewaunee	21,909,902								
Dunn	25,435,782	7,905	2,200	3,050	68.18	4	3,500	3,786	8
Eau Claire	29,944,308	5,141	1,900	2,200	50.00	3	3,500	2,500	30
Green	48,100,240	5,446	2,050	2,400	105.95	3	3,500	1,500	8
Green Lake	23,784,833	5,968	2,250	2,310	71.25	3	3,500	1,500	21
Langlade	19,762,551	3,639	1,700	1,300	71.43	2	3,050	1,500	2
Lincoln	18,767,309	5,821	2,000	2,100	124.24	3	3,500	2,500	1
Manitowoc	59,304,517	4,816	2,000	2,350	96.66	3	3,500	2,000	1
Marathon	54,279,255	6,151	2,000	2,700	57.32	3	3,500	3,000	0
Marinette	27,901,372	6.112	2,000	2,200	67.74	3	3,500	2,000	13
Oneida	13,669.089	4,073	1,800	900	51.92	2	3,500	1,800	1
Outagamie	58,796,161	5,262	1,700	1,700	80.95	3	2,600	2,451	10
Polk	22,682,006	5.199	1,600	1,100	57.45	2	2,970	2,000	2
Price	14,103,401	4,211	1,800	1,250	76.25	2	2,750	1,500	0
Richland	25,667,308	6,512	2,000	3,215	79.01	5	3,500	2,275	2
Rock	87.741,842	4,524	1,800	1,180	99.33	2	2,800	2,000	1
Rusk	12,295,284	4,993	1,800	1,750	78.88	3	3,500	1,500	4
Sauk	47,163,722	7,697	1,800	2,880	108.88	4	3,500	4,000	13
Taylor	14,751,631	5,117	1,700	1,300	76.92	2	3,000	1,800	2
Vernon	31,518,043	[1] 4,553	1,800	1,000	47.28	2	3,000	[1] 1,500	[1] 0
Waupaca	34,739,083	4,612	1,700	2,000	82.22	3	3,500	....	6
Waushara	19,613,077	3,467	1,650	1,000	71.62	2	2,550	1,000	2
Wood	31,093,572	6,941	2,100	2,050	46.63	3	3,500	3,500	17
Total[2]	871,456,971	151,165	50,600	52,435	....	77	87,970	57,712	163
Average	32,276,184	5,599	1,874	1,049	72.92	....	3,258	2,138	....

[1] Data for 1912–13.

[2] The total expenditures for 1914–15 were $158,113; salaries of principals, $51,705; State apportionment, $88,921; county levy, $57,321.

THE COUNTY TRAINING-SCHOOL LAW.

The law providing for the establishment of county training schools for teachers in rural schools reads as follows:

How organized. Section 411—1. The county board of any county within which a State normal school is not located is hereby authorized to appropriate money for the organization, equipment, and maintenance of a county training school for teachers of the common schools. (*1903 c. 338.*)

Board for; appointments, vacancies, bond, organization. Section 411—2. A board to be known as the county training school board is hereby created, who shall have charge and control of all matters pertaining to the organization, equipment, and maintenance of such school, except as otherwise provided by law. Said board shall consist of three members, one of whom shall be the county superintendent of schools of the county or district in which the school is located. The other members of the board shall be elected by the county board, for the term of three years from the date of their election. Vacancies existing in the board, from whatever cause, except in the case of the county superintendent, shall be filled by appointment made by the chairman of the county board, if the county board is not in session when such vacancy occurs. If the county board is in session, vacancies shall be filled by election by said board for the unexpired term. Appointments made by the chairman of the county board, as hereinbefore specified, shall be for the time to elapse until the next regular meeting of the county board. Each person appointed or created a member of the county training school board shall, within 10 days after the notice of such appointment, take and subscribe an oath to support the Constitution of the United States and the constitution of Wisconsin, and honestly, faithfully, and impartially to discharge his duties as a member of said board, to the best of his ability, which oath shall be filed in the office of the county clerk. He shall also, within the same time, file a bond in such sum as may be fixed by the county board, which bond shall be filed in the office of the county clerk. Within 15 days after the appointment of said board, the members thereof shall meet and organize by electing one of their number as president and one as treasurer; the county superintendent of schools shall be ex officio secretary of the said board. The said board shall prescribe the duties of the several officers, except as fixed by law.

Moneys for; how paid. Section 411—3. All moneys appropriated and expended under the provisions of this act shall be expended by the county training school board, and shall be paid by the county treasurer on orders issued by said board.

Number that may be organized. Section 411—4. The State superintendent shall give such information and assistance as may seem necessary in organizing and maintaining such training schools. He shall prescribe the course of study to be pursued; shall have the general supervision of all schools established under this section; shall from time to time inspect the same, make such recommendations relating to their management as he may deem necessary, and make such reports thereon as shall give full information concerning their number, character, and efficiency; provided, that he shall not place upon the said list more than 33 schools. (*1913 c. 259.*)

Accredited list; report; State aid. Section 411—5. 1. Any school established under the provisions of this act whose courses of study and the qualifications of whose teachers have been approved by the State superintendent may, upon application, be placed upon an approved list of county training schools for teachers. A school once entered upon such list may remain listed and be entitled to State aid so long as the scope and character of its work are maintained in such manner as to meet the approval of the State superintendent; provided, that he shall not place upon said list more than 30 schools. On the 1st day of July in each year the secretary of each county training school board maintaining a school on the approved list shall report to the State superintendent setting forth the facts relating to the cost of maintaining the school, the character of the work done, the number and the names of teachers employed, and such other matters as may be required.

Certificate; warrant. 2. Upon the receipt of such report, if it shall appear that the school has been maintained in a satisfactory manner for a period of not less than nine months during the year closing on the 30th day of the preceding June, the said superintendent shall make a certificate to that effect and file it with the secretary of state. Upon receiving such certificate the secretary of state shall draw his warrant, payable to the treasurer of the county maintaining such school, or in case such school is maintained by two or more counties such warrant shall be payable to the treasurer of such school for an amount equal to the sum expended for the wages of duly approved and qualified teachers employed in the school for at least nine months during the school year, provided that a school employing two teachers shall not receive to exceed $3,000, and a school employing three or more teachers shall not receive to exceed $4,000 for said nine months. Any county training school for teachers which maintains its school for more than nine months during any school year shall receive for such additional time a sum of money from the State which shall be in the same proportion to the sum received from the State for nine months as the additional time for which the school is conducted over the nine months is to the nine months. Payments made under this section shall be charged to the appropriation provided in section 172—59.

3. Any school established under the provisions of sections 411—1 to 411—11, inclusive, that will adopt a course of study in domestic science and employ a qualified teacher approved by the State superintendent shall be entitled to receive, in addition to the State aid mentioned in subsection 2 of section 411—5, $250 annually, to be paid in the same manner as other State aid is paid to schools established under sections 411—1 to 411—11, inclusive, of the statutes. (*1915 c. 292, 448.*)

County training school certificates; value of. Section 411—6. 1. Any person who shall complete in a satisfactory manner the course of study prescribed for any county training school, and who shall be of good moral character, shall receive a certificate signed by the principal of the school and by the members of the county training school board. Said certificate shall certify that the person named herein has satisfactorily completed the course of study prescribed for the county training school, and is of good moral character; it shall also contain a list of the standings secured by the person on the completion of each of the studies pursued in the school.

2. *Such * * * certificates shall qualify the holder to teach in any common school in the county under the jurisdiction of the county superintendent of schools in which the county training school is located for a term of three years from the date of its issuance; provided, that in case the holder of the certificate shall not have had at least one year of successful experience he shall not be qualified to act as principal of a second-class State graded school, nor shall he be eligible to teach in any position for which a State certificate shall be required by law;* provided, that in case the holder thereof has never taught, or can not furnish satisfactory evidence of having successfully taught for at least one school year (seven months) in the public schools of this State, said

certificate shall be of full force and effect for one year only from its date of issue.

3. When satisfactory evidence of successful teaching for at least one year (seven months) upon said training school certificate shall be furnished to the county or district superintendent, said superintendent shall remove the limitation, whereupon the training school certificate shall have full force and effect for two additional years.

4. Be it further provided that in case the holder of a county teacher's training school certificate shall have completed a four-year high-school course, and shall have taught successfully for at least seven school months, said certificate shall, when countersigned by the county or district superintendent, legally qualify the holder to teach for a period of five years from the date when such certificate was granted, and shall also be a legal qualification to teach in any department of any State graded school, the principalship of a State graded school of the first class excepted.

* * * 5. Any school superintendent or officer authorized to grant certificates to teachers in Wisconsin schools is hereby authorized, in his discretion, to accept standings obtained by the completion of studies in any county training school in the State, when duly certified by the principal of said school, in lieu of actual examination by said superintendent or examiner at any time within three years from the date of the certificate of completion of the course, by the person desiring to have such standings accepted. (*1913, c. 418.*)

Section 411—6a. No member of any county training school board shall be employed in the county training school for teachers, either as principal or as assistant teacher, during the term for which he was elected or appointed as a member of such county training school board, nor shall any person be employed as a teacher in such school who does not hold some form of a State license or certificate: *Provided*, That the provisions of this section shall not apply to any person now engaged as a teacher in a county training school, nor shall any person be employed as principal of such school who is not legally qualified for the position of principal of a free high school having a four years' course of study, nor as an assistant one who does not hold some form of State license or certificate. (*1911 c. 349.*)

Joint training schools between counties. Section 411—7. 1. The county boards of two or more adjoining counties may unite in establishing and maintaining a training school for teachers for the purposes and on the same general plan as provided for in sections 411—1 to 411—6, inclusive, of the statutes, and may appropriate money for its maintenance, and whenever two or more counties unite in establishing such a school, the county superintendents of the counties so uniting and two members in addition chosen from each such county, no member of any county board being eligible thereto shall constitute the joint county training school board. * * * *The members of the board chosen by the county boards of supervisors shall choose one of the county superintendents of the counties uniting to maintain the school as secretary of the county training school board.* (*1913 c. 105.*)

2. If, at the time of establishing such school, the counties so uniting shall neglect to procure a site or to erect a school building therefor, such joint county training school board shall have power, subject to the approval of the State superintendent, to procure such site and to erect a suitable school building thereon. The joint county training school board shall have power, subject to the approval of the State superintendent, to borrow money for the purposes of this act from the trust funds of the State only, payable in not to exceed 10 years with the annual interest at the rate of not to exceed 3½ per cent, but the total amount of such loans shall not at any time exceed $12,000. Loans for

site and building purposes shall be made payable in equal annual installments, and provisions for the payment of each such installment and accrued interest shall be made in the tax levy and apportionment mentioned in section 411—8 of the statutes. (*1909 c. 98.*)

Apportionment of cost. Section 411—8. Whenever two or more counties unite in establishing and maintaining such school, the county school board provided for in such cases shall determine the amount of money necessary for the maintenance and equipment of the school for the next succeeding year, and annually thereafter. They shall apportion the amount to be raised by taxation among the counties in proportion to the assessed valuation of the real and personal property in each county as last fixed by the State board of assessment, and shall report to the county clerk of each county on or before the first Monday of November in each year the amount of the apportionment so fixed, and such amount shall be levied in the county tax of each county for the ensuing year for the support of the school. Each county treasurer shall, immediately upon the collection thereof, pay over all moneys levied and collected pursuant to the provisions of this act to the treasurer of the joint county training-school board and file the latter's receipt therefor as a voucher. (*1909, c. 98.*)

Treasurer's bond. Section 411—9. Such joint county training school shall choose a member of said board as treasurer, provided that the person so chosen shall not be president or secretary of such board. Such treasurer shall, before assuming his office, give a bond to said board for the faithful discharge of the duties of his office. Such bond shall be in the sum of $15,000 and shall have three or more sureties approved by said board; or said treasurer, in lieu of said bond so signed by said three sureties, may give surety bond to be approved by said board, and the cost of said surety bond may be paid for out of the funds of said joint training school in the discretion of the board. All moneys appropriated to and expended for any such joint county training school shall be expended by the board of such school and shall be paid by the treasurer of said school on orders drawn by the secretary and countersigned by the president.

Who may be admitted. Section 411—10. The board of any training school for teachers established under this law in a single county, or by two or more adjoining counties, shall admit to said school, whenever the facilities provided will warrant said board in so doing, any person prepared to enter such school, and who may reside in any county but not within the district where any training school has already been established. Persons so admitted shall be entitled to the same privileges and subject to the rules of the board adopted for the government of such school.

Tuition of nonresidents, how collected. Section 411—11. Whenever any person not residing in any training-school district shall become a student in any training school, the board of such school is hereby empowered to charge a tuition fee for such person to be fixed by a majority of the members of said board at a regular meeting thereof, provided that such tuition fee shall not exceed 75 cents per week for each nonresident pupil.

The county board of supervisors of the county of which such person is a bona fide resident is hereby authorized to and shall provide by tax upon the property of the county a sum sufficient to provide for the payment of the tuition on account of the residents of said county who have attended such teachers' training school, and the amounts so levied shall be collected when and as other taxes are collected, and shall be paid by the county treasurer of said county to the county treasurer of the county in which the training school enrolling such person is situated, and the amount so received by such treasurer shall be placed to the credit of the teachers' training-school district. (*1909, c. 223.*)

THE COUNTY TRAINING-SCHOOL BUILDINGS.

The provision of buildings for county training schools is here given for the counties separately:

Barron County.—A building originally intended for a courthouse and later used as a high-school building was remodeled at a cost of $3,250. If, at any time, the county shall fail to use the building for training-school purposes, the property will revert to the city of Rice Lake.

Buffalo County.—The city of Alma erected a building in 1902 and is giving its use free to the training school. The building belongs to the city.

Columbia County.—The county erected a building in 1910 at a cost of $30,000.

Crawford County.—The training school is housed in the old public-school building, which is furnished free by the village of Gays Mills.

Door-Kewaunee Counties.—A site on which a building was located was secured for $2,000. The building was remodeled at a cost of $7,500 and belongs to the training school.

Dunn County.—The county erected a building in 1902, at a cost of $25,000. This building is used jointly by the county training school and the county agricultural school.

Eau Claire County.—A building was erected in 1907 at a cost of $18,000. It is used exclusively by the training school.

Green County.—The training school is housed in the upper rooms of the old high-school building. These rooms, together with heat and janitor service, are given free by the city of Monroe.

Green Lake County.—The training school pays $600 rent to the city of Berlin for the entire upper floor in a new school building. This amount includes heat, light, and janitor service.

Langlade County.—The training school has the use of the upper rooms in the city library building. The rent paid is $600 a year.

Lincoln County.—The old courthouse was remodeled at a cost of about $4,400 and is occupied by the county training school.

Manitowoc County.—The training school occupies the upper rooms of the library building. A rental of $600 is paid, which includes, light, heat, and janitor service.

Marathon County.—A building was erected by the county in 1902 at a cost of $16,000. This building is used jointly by the county training school and the county agricultural school.

Marinette County.—A building was erected at a cost of $25,000. It is used by the training school and also by the county agricultural school, which are both under the direction of one superintendent.

Oneida County.—The old courthouse was remodeled at a cost of $2,000 and is used as quarters for the training school.

Outagamie County.—A building was remodeled and furnished free for the training school by the city of Kaukauna. In 1916 the county board voted to erect a new building. This will be ready for occupancy by January, 1917.

Polk County.—A building was erected by the county at a cost of $7,000.

Price County.—Rooms, heat, and light are furnished free by the city of Phillips in one of the public school buildings.

Richland County.—A new building has been erected by the county at a cost of $32,000.

Rock County.—Janesville furnishes rooms free in one of the ward buildings. A sum of $650 is paid for heat, light, and janitor service.

Rusk County.—A new building was erected by the county in 1910–11, at a cost of $15,000.

Sauk County.—A new building was erected by the county in 1910, at a cost of $25,000.

Taylor County.—The city of Medford fixed up rooms for the training school in one of the ward buildings and gives the use of these rooms free, including heat.

Vernon County.—Rooms are rented in the high-school building. The rental paid is $300 per year.

Waupaca County.—Free quarters are furnished by the city of New London in one of the ward buildings.

Waushara County.—A rental of $150 per year is paid for rooms owned by a private individual. The rooms were remodeled at a cost of $100.

Wood County.—A building was erected in 1907 at a cost of $20,000. It is used jointly by the county training school and the county agricultural school.

THE TEACHERS IN THE TRAINING SCHOOLS.

THE PRINCIPALS.

The 27 principals are classified according to qualifications as follows:

Graduates from normal schools and also from some college or university	5
College graduates	6
Normal-school graduates who have done some college work	4
Normal-school graduates	6
Holders of State certificates received through examination	6

The experience that the principals had in teaching when they entered upon their work in the county training schools varies from 5 years to 25 years, the average length of service being 17 years. Practically all of them have at some time taught in rural schools, the length of such teaching varying from 1 to 7 years. Nearly all of them have also had experience in State-graded schools or in city grades. With two or three exceptions they have spent several years as teachers in high schools, and 19 have been principals of high schools and supervising principals of the grades. Three have had experience as city superintendents, and 11 as county superintendents. Five have held positions on the faculties of normal schools.

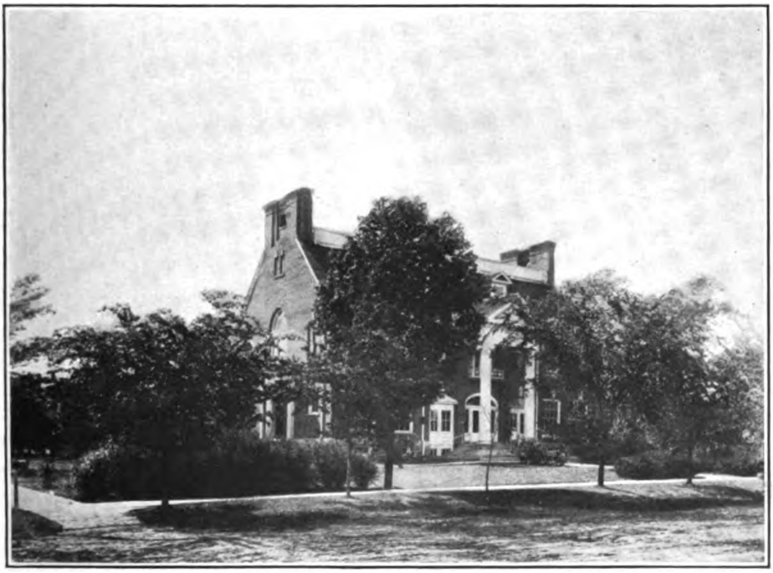
Practically all of the principals have been born and brought up in the country and have a direct knowledge of country conditions. They have been pupils in the country school, and this experience, together with their work as teachers in these schools, gives them a knowledge of actual conditions.

The salaries of the principals average $1,874 a year.

THE ASSISTANTS.

During the present year (1913–14) there are 50 assistants employed. These include the teachers who have charge of the model schools. In Richland County there are 4 assistants, in Columbia,

COUNTY TRAINING SCHOOL BUILDING, COLUMBUS, COLUMBIA COUNTY, WIS.



CITY LIBRARY BUILDING, ANTIGO, WIS.

The Langlade County Training School is conducted on the second floor

Dunn, and Sauk Counties there are 3 assistants in each school. In 14 schools 2 assistants are employed, and in 9 schools the principal has 1 assistant.

The average salary paid first assistants is $1,200 per year, and second assistants $922.

According to qualifications the assistants are grouped as follows:

Graduates from normal schools and also from college	7
College graduates	4
Normal-school graduates who have had some college work	10
Normal-school graduates	24
Holders of State certificates received through examination	8

The first assistants average 11 years of teaching experience when entering upon their work in the county training schools and all the other assistants average 9 years. About half of the number have been brought up in the country, and at least two-thirds have taught in the country schools. Practically all have had experience in elementary-school work. Over one-third of the assistants have taught in high schools. Five have taught in normal schools and one has been a county superintendent.

Special effort has always been made to fill the positions of principals and assistants in the county training schools with persons of adequate education and training who have a sympathetic knowledge of country conditions. A college graduate is not necessarily qualified to take a position as teacher in one of these schools. To be able to do the work properly a person must have a knowledge of country life and must keep in touch with the movements that make for better country conditions. The training school must be able to take the conditions as they are and with the county superintendent plan a campaign that will build up the common schools of the county.

THE COURSES OF STUDY.

The county training schools of Wisconsin do not follow a uniform course of study. A course is proposed by the local authorities and submitted to the State superintendent, by whom it is approved.

There are in general two courses. Those who are graduates of high schools or who have had sufficient preparation are usually able to complete the work in one year, and take what is known as the one-year course. Others who have not had sufficient preparation spend two years at the school. In some instances the students are unable to finish the work in two years. In some of the counties practically all of the students finish the courses in the time assigned, while in other counties where the preparation has been poorer more students fail to finish within the usual time.

The courses used in two of the schools are reproduced here to show the general arrangement of the subjects taken up.

BARRON COUNTY.

TWO-YEAR COURSE.

FIRST YEAR.

First quarter	*Second quarter*	*Third quarter*	*Fourth quarter*
English	English	English	English
Library training	Geography	Geography	Geography
Physiology	Drawing	Agriculture	Agriculture
Elementary science	Physical geography	Physical geography	Reading methods

SECOND YEAR.

English	English	English literature	American literature
History of Wisconsin and of United States	History of United States	History of United States	Civics
Methods	Methods	Management and psychology	Country life
Agriculture	Arithmetic	Arithmetic	Arithmetic
Practice	Practice	Practice	Practice

ONE-YEAR COURSE.

First quarter	*Second quarter*	*Third quarter*	*Fourth quarter*
English	English	English literature	American literature
Library training	Geography	Geography	Geography
Agriculture	Arithmetic	Arithmetic	Arithmetic
Physiology	Drawing	Physical geography	Country life
Methods	Methods	Psychology	Management
Practice	Practice	Practice	Practice

Twenty weeks of successful practice teaching are required of each student before graduation.

The two years' course in English includes grammar, composition, orthoëpy, simple word analysis, the reading of English classics, and American literature.

SAUK COUNTY.

TWO-YEAR COURSE.

FIRST YEAR.

First quarter	*Second quarter*	*Third quarter*	*Fourth quarter*
Spelling	Spelling	Arithmetic	Arithmetic
Reading	Reading	Language	Composition
Plays and games (7)	Physiology	Library reading	Library reading
Drawing (3)	Writing	Physiology (3)	Drawing (7)
Agriculture	Physical geography	Construction (7)	Plays and games (3)
Physical geography		Geography	Geography
			Agriculture

SECOND YEAR.

Professional language	Theory	U. S. history	Sewing
Professional reading and orthoëpy	Reading	American literature	U. S. history
Arithmetic	Professional arithmetic	Grammar	Civics
Cataloguing	Management and law	Observation and practice	Rural economics
Observation and practice	Observation and practice	Practice teachers' conference	Observation and practice
	Practice teachers' conference		Practice teachers' conference

ONE-YEAR COURSE.

FOR HIGH-SCHOOL GRADUATES AND THOSE HAVING FINISHED THE TENTH GRADE.

First quarter	*Second quarter*	*Third quarter*	*Fourth quarter*
Spelling	Reading	Physiology (3)	Civics
Professional language	Theory	Construction (7)	Rural economics
Professional reading and orthoëpy	Professional arithmetic	Grammar	Agriculture
Agriculture	Management and law	Geography	Library reading
Arithmetic	Writing	U. S. history	U. S. history
Cataloguing	Observation and practice	American literature	Drawing (7)
Plays and games (7)		Observation and practice	Plays and games (3)
Drawing (3)		Practice teachers' conference	Observation and practice
			Practice teachers' conference

Courses may have to be changed slightly to meet needs of model department.

Library reading, music, rhetoricals, and physical exercises throughout the year.

Cooking one day each week during the second year.

It will be seen from these courses that most of the time is given to the study of the subjects taught in the common schools. These subjects are studied both from the academic and the professional standpoints. Country school conditions are kept constantly in mind. The State common-school manual is used in connection with the study of most of the common-school subjects.

A brief study of the basic principles of education is made, constant attention being given to the application of these principles in the teaching work of the schoolroom. School management, school law, and the management and use of the school library are studied in all the schools; and here again country conditions are always kept in mind, especially the conditions in the county in which the school is located.

Every school gives at least 20 weeks to the study of agriculture and some give as much as a year. Nature study is emphasized throughout the course.

Observation and practice teaching are carried on under close supervision. Daily lesson plans are made by the students during their practice work, and daily conferences are held in which criticisms and suggestions are made. All the students have practice in the teaching of primary reading, and as a result great progress has been made in the teaching of this subject. As much additional practice as possible is given in the teaching of other subjects. Seven of the training schools have actual practice departments in connection with their institutions, while the remainder secure practice work in the public schools of the city or village in which they are located. Some observation work is also done in the rural schools.

Many of the schools give domestic science and manual training. The chief purpose of this work is to show how some of the simple things may be introduced into the country schools to make the instruction more interesting and profitable. This type of training also has a tendency to develop in the students a proper attitude toward manual labor.

Algebra has been dropped from the courses in most of the schools and more time is given to the study of subjects which the students will have to teach.

Practically all the schools have now introduced in some form the study of rural sociology and rural economics. Special effort is made to make the work as concrete as possible.

The Door-Kewaunee training school has added a one-year preparatory course which students coming directly from the elementary school take before entering upon the regular two-year course. The work of this preparatory year is similar to that of the first year of a high school, so that, if the student concludes not to take up teaching, he may continue his school work in a regular high school. The work done in the preparatory year, however, is taken up with the professional idea in mind.

In all the schools the students maintain literary societies with the special purpose of securing training in parliamentary practice and management of public meetings.

THE STUDENTS.

In December, 1913, there were 1,227 students enrolled in the training schools of the State. The ages of these students are given in the tabulation on page 23.

On page 22 the academic preparation of the students is given in tabulated form. Of the total number attending, 11 per cent were high-school graduates when they entered. The preparation of the others was as follows:

	Per cent.
Having had three years beyond the elementary school	2½
Having had two years beyond the elementary school	10
Having had one year beyond the elementary school	14½
Eighth-grade graduates	62

Of those who had only an elementary education, 42½ per cent were from a one-room country school; 12½ per cent from a State graded school, and 7 per cent graduates of the eighth grade in cities.

On page 22 an attempt is made to show the life experience of the training-school students. It is seen from the summary that, of all the students enrolled in December, about 77 per cent were country bred and 23 per cent were from the city. In many instances, of course, the cities represented are small. Data received from the training schools show that practically all the students, both country bred and city bred, are accustomed to work in their homes and to assume responsibilities.

In considering students desirable for teachers' training schools of any kind, it should be kept constantly in mind that the ability to do academic work is but a part of the necessary preparation. It is felt that a person who has had considerable academic preparation, but who has never been accustomed to assume responsibilities in life, is not likely to become a strong leader in any community, and it is, therefore, considered that practically all the students who are enrolled in the county-training schools are young men and women who are accustomed to work and who have often had to shoulder responsibilities in their homes.

The following summary of the students in the Waupaca County training school was made by Principal C. B. Stanley:

SOME COUNTY NORMAL STATISTICS.

The following are some interesting facts concerning the home life and the preliminary preparation of the students of the County Normal which may prove as interesting to others as they have to the compiler:

Number of students reporting, 41.
Number of families represented, 40.
Average age of students, 17 years.
Lived on farm, all life, 28; most of life, 7; not at all, 5.
Parents dead, mother, 5; father, 5.
Average number of children in families, 5¼.
Oldest in family, 9; next to oldest, 12; youngest, 8.
Having had responsibility for younger children, 23; none, 18.
Kept house more than one day, 31.
Made bread, 30.
Experience in cooking, general, 26; some, 15.
Charge of grocery marketing, 24.
Experience in purchasing clothing, 38.
Have made clothing, 34; dresses, 17.
Milked cows, 31; one girl for 9 years; one milked from 4 to 10 cows for 5 years.
Care of dairy utensils, 29.
Out-door farm work, 35.
Repairing, 24; 14 put in windowpanes.
Responsibile for family darning, 11; for family mending, 12.
Care of garden, 36.
Raising garden flowers, 31; house plants, 31.
Care of flock of poultry, 24.
Fried out lard, 17; made head cheese, 5; made soft soap, 3.
Can spin, 4; knit, 14; crochet, 15.
Had experience in nursing, 17.
Had charge in case of accident, 8.

Have met dangerous situations, 13.
Taught Sunday-school class, 15.
Conducted sociables, 25.
Have taken special lessons, 19.
Taught Sunday-school class, 15.
Deposited money in bank, 13.
Worked away from home for money, 24.
Marketed farm produce, 14.
Had charge of housecleaning, 16.
Done family washing, 32; family ironing, 36.
Can harness and hitch a single horse, 31.

WAUPACA COUNTY NORMAL.

Attention may be called to the fact that the experience of most of the students with reference to travel is rather limited. Some, it is true, have had the opportunity of seeing various localities and conditions, but most of them have been restricted to their home localities. Many of the training schools have had their classes visit mills of various kinds, machine shops, quarries, and the like. In this way the student's horizon is extended, and he gets a broader view of life.

Academic preparation and life experience of students who entered the training schools in 1913.

County training schools.	Enrollment, December, 1913.	Academic preparation.								Life experience.						Average number of children in the family.	Students who work their way through school entirely or partly.
		Number who were high-school graduates.	Had 3 years of advanced work.	Had 2 years of advanced work.	Had 1 year of advanced work.	Eighth-grade graduate only.	From 1-room country school.	From State graded school.	From eighth grade in city.	Country bred.	Having had responsibilities.	Having had no responsibilities.	City bred.	Having had responsibilities.	Having had no responsibilities.		
Barron	62	4	3	10	10	35	20	8	7	60	56	4	2	2	0	6	36
Buffalo	46	5	0	2	3	36	26	7	3	40	38	2	6	4	2	...	11
Columbia	49	8	3	5	9	24	17	5	2	40	40	...	9	8	1	5½	16
Crawford	33	0	2	6	1	24	19	5	0	33	33	0	0	0	0	5	6
Door-Kewaunee	42	8	0	1	14	19	11	5	3	28	20	8	14	9	5	4	3
Dunn	71	1	0	0	13	57	42	12	3	66	64	2	5	4	1	6	39
Eau Claire	62	6	0	9	12	35	29	5	1	46	46	0	16	16	0	5	33
Green	40	6	0	4	0	30	4	21	5	26	26	0	14	6	8	...	8
Green Lake	52	5	0	3	7	37	24	3	10	32	25	7	20	12	8	6	14
Langlade	38	8	0	0	5	25	13	4	8	16	14	2	22	20	2	...	11
Lincoln	23	15	1	0	1	6	6	0	0	10	10	0	13	11	2	7	0
Manitowoc	40	2	3	4	4	27	16	10	1	36	32	4	4	4	0	5	10
Marathon	82	5	2	5	16	54	32	16	6	...	...	...	...	...	...	...	...
Marinette	51	16	0	6	9	20	15	5	0	30	30	0	21	21	0	6	3
Oneida	31	5	0	5	2	19	11	5	3	26	18	8	5	2	3	6	10
Outagamie	39	5	2	6	5	21	10	4	7	20	19	1	9	5	4	7	10
Polk[1]	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Price	35	1	0	4	6	24	14	10	0	32	30	2	3	2	1	5	13
Richland	66	14	2	8	8	34	28	2	4	48	48	0	18	18	0	...	4
Rock	27	3	1	2	3	18	11	3	4	20	16	4	7	5	2	6	5
Rusk	43	2	3	6	11	21	12	5	4	34	30	4	9	7	2	4½	30
Sauk	43	4	2	4	10	23	19	3	1	28	20	8	15	11	4	5½	6
Taylor	38	2	1	8	4	23	17	4	2	25	25	0	13	8	5	6	8
Vernon	53	2	0	11	7	33	22	3	8	51	43	8	2	2	0	6	30
Waupaca	41	4	1	6	6	24	21	3	0	36	(1)	(1)	5	(1)	(1)	5½	16
Waushara	36	1	0	0	0	35	25	7	3	36	36	0	0	0	0	5	6
Wood	84	2	4	8	16	54	54	0	0	70	65	5	14	14	0	6	48
Total	1,227	134	30	123	182	758	519	155	85	889	784	69	256	201	50	5½	376

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[1] No information.

Ages of students enrolled December, 1913.

County training schools.	Enrollment.					Juniors—First year.							Seniors—Second year.						
	Total.	Juniors.		Seniors.															
		Male.	Female.	Male.	Female.	Under 16 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years or over.	Under 16 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years or over.
Barron	62	1	28	2	31	3	15	4	5	2	0	0	2	4	15	4	5	1	2
Buffalo	46	4	19	3	20	0	13	8	0	2	0	0	0	2	5	5	5	5	1
Columbia	49	0	11	0	38	2	5	0	2	2	0	0	0	3	10	13	5	3	4
Crawford	33	1	17	2	13	11	4	3	0	0	0	0	0	4	3	5	1	0	2
Door-Kewaunee	42	11	12	6	13	3	8	6	4	1	0	1	0	0	2	8	8	1	0
Dunn	71	2	35	1	33	13	12	8	2	0	1	1	5	6	15	5	2	1	0
Eau Claire	62	2	27	1	32	0	13	9	5	1	0	1	0	0	11	11	3	4	4
Green	40	0	22	0	18	3	3	3	6	7	0	0	0	0	1	3	4	6	4
Green Lake	52	6	22	2	22	4	13	9	1	0	1	0	0	4	7	6	4	0	3
Langlade	38	0	10	0	28	0	7	2	1	0	0	0	0	2	9	9	5	2	1
Lincoln	23	0	0	0	23	0	0	0	0	0	0	0	1	0	4	11	5	2	0
Manitowoc	40	8	17	2	13	0	14	8	2	1	0	0	0	0	0	10	4	0	1
Marathon	82	5	37	5	35	11	20	8	3	0	0	0	0	8	17	8	3	2	2
Marinette	51	2	17	2	30	0	11	7	0	0	1	0	0	0	10	8	8	5	1
Oneida	31	0	10	1	20	3	5	2	0	0	0	0	0	0	7	9	1	2	2
Outagamie	39	3	13	2	21	8	4	2	0	0	0	2	1	5	6	4	4	0	3
Polk[1]	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Price	35	4	14	0	17	5	11	2	0	0	0	0	0	8	2	3	2	1	1
Richland	66	7	23	7	29	4	12	10	3	1	0	0	0	5	8	10	6	2	5
Rock	27	0	12	0	15	3	0	6	2	1	0	0	0	0	2	6	3	3	1
Rusk	43	7	11	2	23	6	0	7	4	1	0	0	1	0	3	13	3	5	0
Sauk	43	1	22	1	19	6	7	7	2	0	0	1	1	3	5	4	5	1	1
Taylor	38	0	12	1	25	7	3	2	0	0	0	0	3	7	6	8	1	1	0
Vernon	53	2	29	4	18	6	9	10	5	0	0	1	0	2	7	5	4	4	0
Waupaca	41	1	20	1	19	8	6	9	3	0	0	0	0	5	10	3	1	0	1
Waushara	36	0	21	1	14	10	9	1	0	1	0	0	0	4	4	2	3	0	2
Wood	84	6	41	2	35	8	11	16	8	4	0	0	0	9	7	7	7	4	3
Total	1,227	73	502	48	604	119	215	149	58	24	3	7	14	81	196	180	102	55	44

[1] No information.

County training-school graduates.

County training schools.	Total number.	Men.	Women.	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Barron	147	1	146	....	....	....	....	....	....	....	....	9	21	20	18	30	19	30
Buffalo	250	46	204	....	....	....	23	34	20	26	12	17	18	17	21	19	24	19
Columbia	119	8	111	....	....	....	....	....	....	....	....	....	4	22	21	18	26	28
Crawford	81	6	75	....	....	....	....	....	....	....	....	....	10	19	9	7	22	14
Door-Kewaunee	119	26	93	....	....	....	....	....	....	....	....		16	25	21	23	15	19
Dunn	467	53	414	18	26	33	34	37	24	47	33	33	30	32	31	25	36	28
Eau Claire	207	9	198	....	....	....	....	....	....	12	28	22	28	20	23	16	32	26
Green	124	2	122	....	....	....	....	....	....	....	....	....	....	16	34	23	32	19
Green Lake	95	11	84	....	....	....	....	....	....	....	....	....	....	12	22	21	21	19
Langlade	127	0	127	....	....	....	....	....	....	....	11	15	14	18	17	19	15	18
Lincoln	93	0	93	....	....	....	....	....	....	....	....	2	10	8	15	22	15	21
Manitowoc	302	92	210	....	....	32	25	21	21	28	20	23	24	19	27	23	29	15
Marathon	421	39	382	23	16	27	32	26	25	26	30	21	32	29	30	24	27	43
Marinette	217	18	199	....	....	....	....	....	....	11	36	24	24	25	23	17	26	31
Oneida	42	0	42	....	....	....	....	....	....	....	....	....	....	....	6	12	13	11
Outagamie	26	1	25	....	....	....	....	....	....	....	....	....	....	....	....	....	8	18
Polk	144	9	135	....	....	....	....	....	....	6	11	13	26	21	18	17	14	18
Price	50	0	50	....	....	....	....	....	....	....	....	....	....	5	11	10	10	14
Richland	337	49	288	....	....	....	19	37	23	31	25	24	31	23	39	35	19	31
Rock	44	0	44	....	....	....	....	....	....	....	....	....	....	....	....	14	17	13
Rusk	131	8	123	....	....	....	....	....	....	....	....	16	19	18	15	26	13	24
Sauk	125	2	123	....	....	....	....	....	....	....	21	10	12	15	18	13	17	19
Taylor	22	1	21	....	....	....	....	....	....	....	....	....	....	....	....	....	2	20
Vernon	171	15	156	....	....	....	....	....	....	....	....	17	26	20	28	22	33	25
Waupaca	251	18	233	....	....	....	6	26	23	24	19	17	22	23	26	27	23	15
Waushara	88	2	86	....	....	....	....	....	....	....	....	....	....	19	11	20	23	15
Wood	306	18	288	....	....	....	....	22	25	25	18	25	29	31	37	37	28	29
Total[1]	4,506	434	4,072	41	42	92	139	203	161	231	264	298	396	457	521	520	559	582

[1] In 1915 there were 638 graduates, making the total number 5,144.

THE GRADUATES.

The graduates of the county training schools are listed in the table given on page 23.

The table on page 26 gives the number of the graduates who were in the teaching work during the year 1913–14. These teachers are further classified in the same table so as to show the number who are teaching in the rural schools and graded positions of their own counties, those who are teaching in rural schools and graded positions in other portions of the State, and, finally, those who are teaching in other States. Of the total number that were graduated previous to 1913–14 (3,924), there were 2,013, or about 51 per cent, teaching in 1913–14.

Questionnaires were sent to the county superintendents in whose counties the training schools are located, asking them to give their estimate concerning the work done by the graduates. Four groups were suggested, namely: Excellent, good, fair, and poor. The grading done by the county superintendents is also given on page 26. It will be seen that of the total number teaching in these counties the groups are as follows:

Of the total number whose work was reported upon (1,440)——
  312, or 21½ per cent, are rated as excellent;
  642, or 45 per cent, are rated as good;
  311, or 21½ per cent, are rated as fair;
  111, or 7½ per cent, are rated as poor; and
  64, or 4½ per cent, are unclassified.

It should be understood that the rating will naturally vary in different counties. In some of the counties the great majority of the teachers had no special training for their work before the establishment of the training school. The work done by the training-school graduates in such counties was so far superior to that done by the ordinary beginner that in most cases it would be rated as excellent. In other counties, where the schools have been established for some time, and where a large number of the teachers have had special training, the county superintendent naturally applies a higher standard, and a smaller per cent would be rated as excellent. In some instances, where the rating was especially high, letters were written to the county superintendents calling their attention to the matter, but in all cases answers came back stating that the work done by the training-school graduates is far superior to the work to which they have been accustomed.

The county superintendents were asked to specify wherein lies the strength of the training-school graduates and also to set forth their weaknesses. Almost universally the reply has been that the training-school graduates "know what to do." Their preparation has led them to consider the conditions under which work in the country school must be done, and their planning in the training school has had continually in mind the country-school conditions. Consequently, when they enter the school they have definite ideas in regard to procedure. They know what is to be taught, the classes that are to be organized, the equipment with which they have to work, etc. They "get down to business" at once, whereas the teacher who has had no special training often wastes a great deal of time in getting ready.

Many of the county superintendents also mentioned the enthusiasm with which the training-school graduates take up their work. They have been looking forward to the schoolroom work during their training-school career and many of them have developed unusual interest. Frequent references are made to the loyalty of the training-school graduates to the profession. As a rule they are in regular attendance at teachers' meetings and institutes, and take part in discussions to a much greater extent than the ordinary beginner does. It should be understood, of course, that the enthusiasm with which the graduates take up the work depends greatly upon the training school faculty and the county superintendent.

In this connection mention should be made of some of the weaknesses which have been found in training-school graduates. The one most commonly complained of is lack of sufficient scholarship. This is not surprising when it is remembered that many who have entered the training schools have been poorly prepared in fundamentals. It should be noticed also that this poor preparation is found not only in pupils who enter directly from the country schools, but also in those who have had more advanced work. There are even some high-school graduates who, though they have spent four years in work beyond the elementary school, have done very little of the work that is required to be taught in the elementary school. In many cases they have had very little of the common branches and much of what they have had in the other branches has been "above their heads."

The result is that frequently these students come into the training school very poorly prepared to enter with zeal upon the professional work. Often it is found necessary to give them much work in the common branches. Of late, however, there has been a tendency to emphasize the common branches more in the regular high-school course, and the result is that high-school graduates are becoming better prepared in the fundamental branches. Instead of spending a few weeks in so-called "reviews," the high schools are now beginning to give half years, and years, to such subjects as arithmetic, geography, grammar, civil government, and hygiene.

In a few instances the county superintendents mentioned that the training-school graduates do not enter the work in the proper spirit. It is true of all institutions preparing teachers that some of the graduates are bound to go out with the feeling that "they know it all," and undoubtedly some graduates of the training schools are numbered among these unfortunates.

One criticism that is occasionally made is that the graduates do not adapt themselves to the communities in which they teach. This is true of a comparatively small number. It has been pointed out previously that most of these students are country bred and are therefore accustomed to country life. Occasionally, however, a student develops a snobbish attitude when he gets away from home surroundings and continues it when he gets back. As a rule the atmosphere of the training school has a tendency to correct such notions.

The graduates who were teaching in 1913–14.

County training schools.	Total number of graduates previous to year 1913–14.	Number of these teaching during year 1913–14.	Number teaching in—					Number whose work was reported on.	Number whose work according to county superintendent is—					Number of graduates from other county training schools.	Number of rural schools in county.
			Rural schools in home county.	Graded positions in home county.	Rural schools in other counties.	Graded positions in other counties.	Other States.		Excellent.	Good.	Fair.	Poor.	Not classified.		
Barron	117	102	65	9	20	....	8	65	12	44	7	2	....	0	130
Buffalo	231	114	55	18	10	11	20	75	8	40	22	5	....	2	81
Columbia	91	70	47	10	9	2	2	60	25	29	4	2	....	0	130
Crawford	67	36	24	3	6	1	2	24	0	17	6	1	....	1	93
Door-Kewaunee	100	71	40	15	5	3	8	55	11	29	13	2	....	7	106
Dunn	439	141	87	10	19	5	20	100	22	47	22	9	....	5	123
Eau Claire	181	111	37	14	36	19	5	44	22	16	4	2	....	1	77
Green	105	71	40	6	18	6	1	46	....	....	....	....	46	....	120
Green Lake	76	50	20	3	13	7	7	24	3	15	5	1	....	1	65
Langlade	109	79	54	12	5	3	5	67	8	32	25	2	....	1	73
Lincoln	72	60	42	5	2	8	3	43	22	8	13	0	....	1	69
Manitowoc	287	115	81	18	2	7	7	99	21	46	27	5	....	2	96
Marathon	378	139	102	16	10	6	5	130	20	36	52	22	....	1	186
Marinette	186	103	45	27	8	14	9	57	19	29	18	1	....	0	82
Oneida	31	26	18	1	3	0	4	18	....	....	....	....	18	....	51
Outagamie	8	8	6	0	0	1	1	26	12	10	2	2	....	20	117
Polk	126	69	56	13	(1)	(1)	(1)	69	13	34	18	4	....	1	100
Price	36	28	23	3	1	1	0	27	11	9	2	5	....	4	76
Richland	306	77	67	10	(1)	(1)	(1)	67	15	42	7	3	....	5	115
Rock	31	27	25	1	1	0	0	33	0	27	6	0	....	7	158
Rusk	107	45	42	3	(1)	(1)	(1)	39	12	13	10	4	....	2	69
Sauk	106	62	41	6	10	2	3	44	9	21	10	4	....	3	147
Taylor	2	2	1	1	0	0	0	9	2	3	4	0	....	7	78
Vernon	146	76	35	9	2	1	29	44	8	10	10	16	....	2	141
Waupaca	236	132	46	11	41	18	16	46	8	16	13	9	....	1	122
Waushara	73	57	40	9	6	0	2	51	19	18	8	6	....	2	96
Wood	277	142	68	8	32	5	29	68	10	51	3	4	....	0	96
Total	3,924	2,013	1,207	241	259	120	186	1,440	312	642	311	111	64	76	2,797

[1] Exact number not known.

In the following table are given the number of training-school graduates who have attended higher institutions since completing the training-school course. In studying this table a person should keep in mind that some of the training schools are comparatively new, and for that reason the number of graduates who have attended higher institutions is small.

Number of training-school graduates who attended higher institutions—Number who finished such institutions.

Training schools.	Attended higher institutions.	Finished higher institutions.	Training schools.	Attended higher institutions.	Finished higher institutions.
Barron	(1)	(1)			
Buffalo	45	30	Outagamie	0	0
Columbia	7	0	Polk	(1)	(1)
Crawford	10	0	Price	0	0
Door-Kewaunee	4	2	Richland	100	92
Dunn	30+	25+	Rock	0	0
Eau Claire	23	8	Rusk	21	0
Green	6	2	Sauk	1	1
Green Lake	11	4	Taylor	0	0
Langlade	(1)	(1)	Vernon	5	1
Lincoln	6	6	Waupaca	33	9
Manitowoc	71	40	Waushara	2	0
Marathon	49	19	Wood	78	7
Marinette	21	10			
Oneida	3	0	Total	526	256

(1) Data not available.

COMMENTS ON THE WORK OF THE TRAINING SCHOOL GRADUATES BY THE COUNTY SUPERINTENDENTS.

The county superintendents of the counties in which the county training schools are located were asked to state the strength and the weaknesses of the training-school graduates as they observed them in their regular school work. The following responses were received:

1. As a rule training-school graduates are strong in initiative, resourcefulness, methods, orderliness, and neatness of school rooms. * * * Some of them are weak academically in upper form work and also in methods.

2. The greatest strength of the training-school graduates is in their preparation for their work in the graded and rural schools, their understanding of school problems and professional spirit. They know what to do and how to do it. * * * Some lack maturity.

3. The greatest strength of the training-school graduate is the acquired enthusiasm for the work and the knowledge of means and of ends regarding country school work. Most of them look forward to the beginning of school with pleasant anticipations. * * * One of the weaknesses is to underestimate the importance of thoroughness in upper form work.

4. They understand rural life better than others foreign to the country and are better liked in their communities as a result. This, of course, leads to many advantages. * * * Beginners show uncertainty; sometimes act as if imitating. There is a lack of or insufficient academic training.

5. They do better work in reading and make better assignments.

6. Strong in resourcefulness and the ability to meet the unexpected. * * * Some neglect to live up to their training.

7. They are strong in organization, in planning their work for each day, in presentation, and in primary reading. * * * Some of them are weak in knowledge of subject matter.

8. They appreciate the responsibility resting on them and make daily preparation for their work. * * * Some show weakness in government. Some of them are of immature judgment.

9. They are workers. They have ability to organize and lead. They show professional spirit. They get away from the mere book teaching and present practical needs. * * * In some cases knowledge of subject matter is limited.

10. They take great interest in school and community. More power in drill work. Strong in reading and primary work. * * * Some lack maturity. Some, possibly, have too much confidence in themselves.

11. They know what to do and how things should be done. In general they are more professional in their duty toward the work of teaching. In attending teachers' meetings the training-school graduate is far ahead of the old-type teacher.

12. They are strong in methods and especially in primary and middle-form work. They have good ideas regarding special programs, etc. They cooperate with the county superintendent and training school. * * * Some show a weakness in discipline and also in their ability to mingle properly in the social life in the community.

13. They know how to go about work, plan programs, prepare lessons, and make assignments, and hence do not waste time. * * * There is a lack of scholarship on the part of those who are not high-school graduates.

14. They are strong in subject matter, habits of application, and general good teaching. They know how to plan their work and organize the school. They have a foundation so that they are able to receive constructive criticism from the superintendent.

15. They are strong in methods of presenting work when compared with untrained teachers. They are strong also in "mixing" with community. * * * Weakness in teaching upper grades. Graduates not mature. The weaknesses are lack of maturity, confidence, and in many cases academic qualifications.

16. They are strong in methods of handling class work and also in making assignments. * * * Some of them get the notion that their preparation is complete. They do not know well enough the subject to teach. They are in many cases too immature.

17. They are strong in preparing work, assigning lessons, and in methods of instruction. * * * Many are too young and some deficient in knowledge. They find the work more difficult than they anticipate.

18. Most of them have interest in country life. Their work is better organized. They are better prepared for busy work and do more social center work. * * * Many lack in experience, education, and training previous to time they start training schools.

19. Majority anxious to make success. Many take active interest in civic society matters. * * * Many immature girls, weak in scholarship and lack of sense of responsibility.

20. They organize the school with less delay. They have a supply of seat work and are prepared with drills and devices that have been provided at the training school. They have a better attitude toward the country, its social and economic problems. There is a disposition to find out, write letters, ask questions, and use references. * * * Some are weak in discipline and in the teaching of arithmetic and spelling.

21. They are strong in teaching language.

22. They give the impression that they have something definite planned. * * * They have a tendency to overdo the busy work.

23. They are strong in discipline, cooperation, and desire to do their very best; also in instruction and assignments. * * * There is a lack of academic preparation before entering training schools.

WORK DONE BY SOME OF THE GRADUATES OF TRAINING SCHOOLS.

Many instances could be given where graduates of training schools have brought new life into the work of the country schools and also new life into country communities. The following accounts are given not merely to tell what some of the graduates have done, but as suggestive of what may be done by all teachers who are going into country school work. Institutions that train young people for work in country communities would do well to give them information regarding what has really been accomplished in districts of the home county.

Miss P. taught at ———. She was imbued with the spirit of community service. She called in the physician from the neighboring village and asked him to come and speak to her people on "Tuberculosis." He had been principal of one of the high schools of the State and readily responded. The interest which his address aroused led the people to desire regular gatherings of that kind. The teacher secured the organization of a society which has maintained monthly meetings for the past three years. Miss P. left the district, but her influence is still felt.

Miss W. was the teacher in the ——— school. She had had trouble with Ed, and he left school on Friday evening vowing never to return. Miss W. went to her home for the week end and was haunted by a sense of failure. She determined that she would not allow Ed to leave school. On her return to her district on Sunday she went immediately to Ed's home, thrashed out the entire trouble with him, got his promise to return to school, and went happily to her repose. On Monday Ed came back to school and finished the common-school course that spring, went on to high school, and finished the course there with credit to himself and his teachers. He is now one of the most progressive young farmers in ——— County.

Miss B. taught at ——— three years. She was no common teacher, but was a real spirit of progress in the community. She went after the board, after the boys, after their parents until she secured for her school ground the best equipment of play apparatus in the county. She organized a Sunday school there and taught in it herself. She really revolutionized the attitude of the people in that district.

Miss H. finished the County Normal in 1910. She secured a school in the town of ———. Here, somewhat in the backwoods, she went to work. She organized the women and girls into a sewing circle. She secured a Babcock milk tester and got all her pupils and many of the farmers interested in the testing of milk. She interested the farmers in tested seed corn, so that every farmer in her district planted tested seeds. She secured through her sewing circle the most complete equipment of almost any school in the county. She is still there (1914). They are paying her more than $100 a year better salary than when she began work and will not let her go.

One of the training school principals writes the following in reply to the question regarding the work done by the graduates of his school:

As to the instances where communities have been aroused or benefited because of the work done by our graduates, I can not think of anything very startling or vivid under that head. On the other hand, we receive three or four letters every week from our graduates in which they tell of things that they are doing, and they are usually things that are worth while. The spirit of our graduates, as exemplified in their work, seems to be to do something more than merely keep school in the community. For instance, one girl from whom I received a letter this week has just had a sociable at which she made $26. With this she will buy single seats for the school. A good many of our graduates have raised money and purchased articles for the schools in which they teach. Several have purchased organs.

Last year 14 agricultural meetings were held in different parts of the county through the instrumentality of pupils who have graduated from this school, cooperating with the county agriculturist. He reports them generally active in promoting rural welfare and advancement.

I can think of another instance where one of our graduates persuaded a young man who had left school to go back and finish the common-school course, and encouraged the boy to enter high school. He is now a junior in the high school. Another case I can think of is where a graduate persuaded a young woman to go back to school and finish the common-school course with the same result.

One of our graduates said that the mail carrier on her route told her that the people were taking more newspapers this year than last, and this is the result of the interest she has aroused in current events in her school. Three of our graduates have already been asked to come back next year, which seems to me a splendid proof of the work that they are doing. One of our young men graduates was given a raise of $7.50 per month at the end of the first term and at the same time asked to come back next year. He has 50 pupils.

The following account was received in response to a request regarding the work done by graduates of training schools in one of the counties:

In a certain district in this county there was a very poor school building, and a very poor school because of poorly paid, untrained teachers.

A prosperous farmer there whose large family had grown up and settled around him soon comprised the majority of the residents of the district. A daughter of one of the older children of this prosperous farmer attended a training school and became a well-trained and legally qualified teacher. When it dawned upon this settlement of relatives that they had such a teacher in the family, they questioned among themselves why they should continue to hire untrained teachers and suffer from a poor school while other schools profited by the services of this worthy daughter.

At a school meeting they decided to employ this young lady for that year. She was so successful in her work with the pupils that soon the parents became interested in the school. The programs given and the social events she inaugurated brought the parents to the schoolhouse. They then began to realize what a poor place they had for a school. They became interested in the welfare of their children, and proud of the live little school they had. At the next annual meeting they decided to build a new modern schoolhouse. This they did, sparing no pains in making it sanitary and convenient. They installed a furnace. They made a good well for drinking water, and made a cistern for soft water, plumbing a lavatory where the pupils could enjoy being cleanly. They built nice wardrobes, and a nice little library room separated from the main room by folding doors.

They then hired for another year the same young lady who had given such satisfaction.

She had a school and community program, a Harvest Sociable at her school this fall. It was a unique affair. The schoolhouse was decorated with shocks of corn and strings of seed corn. A motto: "Corn is King," occupied a prominent place on the front blackboard.

After a social hour a program was given. The first part of the program was a review of the work the school had done in the fall study of corn, preparing the soil, cultivating, selecting good seed, harvesting corn, curing the seed, preparing seed for planting, and judging of corn. The school had worked out a fine set of products, excelling the one gotten out by the Corn Products Co., and these were used in the different talks on the uses of corn. Maps showed the corn-growing region, and Wisconsin with its silos was not forgotten. Autumn songs livened the program.

Then came the farmers' side of the program, and three or four farmers talked on topics concerning the farm, each speaking on a subject in which his farm showed he was an expert. The teacher had shown great wisdom in asking men worthy to be heard upon subjects which supplemented her own instruction.

The children wanted me to see their basement; so the teacher took me down to see it. The furnace sat in the middle, dividing the one large room. In each corner was a playhouse, and one or two others edged in between. Each playhouse contained the rustic furniture made by the children and was supplied with rugs of their own making, pictures of their own framing, tables furnished with dishes and linen; and all was complete. The ingenuity of each family or set of children was plainly shown, and there were visible signs of a little suggestion by the teacher.

I was told that the children ate their dinners in their play dining rooms and that they often visited each other and ate dinner with each other, observing the best etiquette of the neighborhood. They were happy and proud of their lovely basement.

From another county the following report was received:

Many of the graduates of the training school have been instrumental in awakening the people of the districts in which they have taught.

The following will serve as a concrete example: Jt. Dist. 10, ———, is divided by the fact that the families live on two main roads each leading to the city of ———. In the fall of 1911 they hired a training-school graduate who thought that something ought to be done to bring the community together in a social way.

A literary program was given, after which a basket supper was held, the baskets being sold to the highest bidder. The people enjoyed the meeting so well that they voted to organize the Narrows Prairie Country Club, of which the teacher was made secretary.

With the money raised at the sale of the baskets and a small additional amount donated by the club an organ, bookcase, Babcock tester, and a lighting system were secured for the school.

The club is still in a thriving condition and has brought, besides many local people, several professors from the university to speak at the meetings.

The people of the district take part in the program by giving plays, talks, and debates. Some of the topics which have been considered are: Alfalfa growing, testing and curing seed corn, testing the dairy herd, cooperation among farmers, poultry raising, and woman suffrage.

The teacher taught the pupils how to use the Babcock tester and then allowed them to take it to their homes, keeping it about two weeks on each farm and testing the home herd. In another country district taught by a training-school graduate the classwork is so strong that the county superintendent has had the teacher put on class exercises before the teachers of the State graded schools and the school-board convention.

> The work put on before the school-board convention was on the growing of alfalfa. Several of the members present questioned the class and found them able to answer their questions as intelligently as they had the teacher's.
>
> The commission sent to the United States from Uruguay, South America, to study the educational methods of this country spent one day in ——— County. The forenoon was spent in the training school and the afternoon in the school taught by the teacher mentioned above. They were very much pleased and interested in the work they saw.

In a certain school district the people were mostly Finlanders. Some of the children could not speak a word of English. One of the farmers had a cream separator which did not work. He went to the clerk of the school board for help and was referred to the teacher. She took the machine apart, found the trouble, and fixed it. The result was that the opposition to the teaching of agriculture vanished, and money was provided for the purchase of a Babcock tester.

In a certain school request had been made for two or three years for a sweeping compound, more frequent scrubbing, and for some supplementary reading books. The requests had been continually refused. A graduate of the training school held "potato" meetings and took occasion to emphasize these requests. The result was that she got all she wanted and more than previous teachers had asked for.

As the direct result of the teaching of agriculture in one of the training schools, more than a dozen Babcock testers have been installed in the schools of the county. Corn testing has been introduced in at least 20 schools where no such work was done in previous years. Potato judging is now going on in 15 schools.

From another county the following report has been received:

> At the present writing there are teaching in this county 58 graduates of the training school. Besides this number of graduates, there are at least 30 others teaching who have done some work at the training school. There are 11 of its graduates teaching in other counties of this State and two in other States. Eight of the young women have undertaken schools of one. In no case need the county or State think that the time spent by the young women in fitting themselves for the teaching profession is wasted. They will be able to help the boys and girls of to-morrow all the more because of the training they received. Six graduates are continuing their preparation for teaching at higher institutions of learning. From the reports received, they are successfully doing the work required of them at their institutions. The remainder of the graduates are either at home or pursuing other lines of work.
>
> Each year the school has had a greater number of calls for its graduates than it has been able to fill. * * * Most of the graduates have proven successful in their work. As is to be expected in any line of work, failures have occurred. In general, failures have been due to a lack of personality rather than to the things which the school can give its students in so short a time. It is impossible to transform a person in one or two years. Sometimes a lifetime can not accomplish the transformation. No school can expect to turn out as a successful teacher everyone whom it graduates, let alone all who enter it. The best recommendation I know of for the school's graduates is the long

CLASS IN SEWING, EAU CLAIRE COUNTY TRAINING SCHOOL.

TESTING CORN, EAU CLAIRE COUNTY TRAINING SCHOOL.

CLASS TESTING MILK, EAU CLAIRE COUNTY TRAINING SCHOOL.

CLASS IN GEOGRAPHY METHODS STUDYING JAPAN, EAU CLAIRE COUNTY.

tenure many of them are serving in the same school. Several have taught for three years in the same district and many for two years. Others have returned to the first district where they taught after teaching elsewhere.

The salaries of the graduates before the minimum-wage law had been passed were good, varying from $37.50 to $65 per month. There is a call in graded school positions for our graduates, especially young men who are also graduates of high schools. Two of our young men are filling such positions at $65 per month. The school could not fill two similar positions this fall because we had no graduates for the places.

The school has stood for more than the instruction of pupils within the four walls of its building. It has followed its graduates in the field and has attempted to help them over difficult places. Not alone to the graduates of the school has the spirit of helpfulness gone. It has attemtped to be of service to every teacher of the county. It has been the only school of its kind in the State which has given the entire teaching force of a county an opportunity for consultation every Saturday by holding school on that day. The faculty have given their time on Mondays to the visitation of schools. During its six years' existence there are but eight schools in the entire county that have not been visited. Some of the schools have had as many as six visits.

From time to time the school has sent out printed material to all schools of the county. With the help of the county superintendent it has published the quarterly, ———, which has been sent free to all teachers and school board members of the county. Other publications in which the county superintendent and training school faculty have cooperated are " Farm Accounts " and "Essentials in Education."

The ideal of the school is one of service and helpfulness to all of the teachers of the entire county all of the time.

The following is one of the replies received:

Our graduates have awakened much interest in agricultural and other industrial work. They have arranged for agricultural meetings to which outside speakers have been invited. They have organized literary societies and sewing circles and held contests of various kinds. In the corn contest (1913) 554 pupils of the county took part. Although there has been nothing startling in any one community, there has been a general awakening of interest in all phases of educational work.

THE WORK OF THE COUNTY TRAINING SCHOOLS OUTSIDE OF THE TRAINING OF TEACHERS.

The most important work of the county training school is to prepare teachers for country school work. This was the purpose the people had in mind when the law was first enacted. The schools have, however, many other functions which are worthy of mention:

1. The teachers in the training school aid the county superintendent in holding teachers' meetings during the year. Since these teachers are thoroughly familiar with local conditions and needs, they are able to give to the country school-teachers help and suggestions of the most practical kind.

2. The members of the training school faculty visit country schools. They do this first of all to keep in touch with the schools of the county in order that they may know the needs of these schools. The visitation is carried on also for the purpose of knowing the work that the graduates of the institution are doing. In this way they learn by observation the strength and weakness of the graduates.

This school visitation is of considerable help to the county superintendents of the counties in which the schools are located. Most of the schools have made definite provision for this visitation work.

3. The members of the training school faculty assist the superintendents in the social center work of the county. They do this in training the students to lead in this work when they get into the schools of the county, and they also help by going into the county to speak at educational gatherings of various kinds.

4. The members of the training-school faculty are students of rural problems. In order to prepare teachers for country schools they must necessarily understand country needs and country conditions.

In order that this study may be of mutual benefit to the various counties maintaining training schools, the principals have organized themselves into an association.

5. Many of the training schools assist the county superintendents in their work by preparing circulars and publications of various kinds, giving suggestions to the teachers who are working in the schools.

6. Besides visiting the country schools, the members of the faculty help the teachers of the county through correspondence. The teachers in the training schools are at the service of the country teachers at all times, and the graduates especially come to the members of the faculty with their questions.

7. Some of the training schools have undertaken to furnish educational material for country teachers. In some instances the schools loan professional books.

8. Some of the training schools are maintaining educational columns in the local newspapers. The material published in these columns is of value not only to teachers, but to the general reader.

9. Some of the training schools assist the county superintendent in conducting contests. In some instances the schools have provided for farmers' short courses. This work does much to foster educational sentiment in the different communities.

10. In a general way it may be said that a training school unifies and systematizes the school work in the county. The teachers naturally become united into a body that has a common aim and, to some extent, uniform methods. The county superintendent can, by

keeping in close touch with the work done in the training school, greatly influence the school work from year to year.

In addition to the above benefits derived from a county training school, the following have been set forth by some people:

(*a*) By the establishment of the county training school, more young people get additional schooling. It has been pointed out that most of the students in the training school are from the country communities. In a number of instances these students did not have convenient access to other schools.

(*b*) A training school has often been the means of interesting parents in the cause of education. Many of the people whose children have attended a training school have been impressed with the importance of the teachers' work and the necessity for careful preparation.

(*c*) The training school is an institution that especially brings the young people of the country into educational work. If the country communities are to develop educationally, they must largely do so under the leadership of their own people. There is a decided advantage in having country-bred people teaching in the country schools.

ADVANTAGES OF THE TRAINING SCHOOL AS AN INSTITUTION FOR TRAINING COUNTRY TEACHERS.

1. The members of the faculty are persons of maturity and are well prepared for the work, both in scholarship and experience. They are men and women who understand country life, and they are interested in its development.

2. Most of the students who attend training schools are from the country. The experiences that they have had are of great value to them when they become teachers.

3. The institution has a single purpose—the preparation of teachers for country-school work and the enrichment of country life in general. The school is vocational in nature and has, therefore, a definiteness often absent in other institutions.

4. The training schools, being local institutions, can better adapt their work to the needs of the localities they serve than can institutions that are more general in their work. The condition and needs of the people in the immediate vicinity are kept in mind in all the school work.

5. The institution is of great help to the county superintendent in all his work and enables that official to bring about educational improvements.

6. Because of its peculiar function in the educational work, the training school is hampered but little by the domination of higher institutions. It has been left free to arrange its work so that the best possible training may be given the young people for their particular work.

SUGGESTIONS FOR IMPROVING THE WORK OF THE COUNTY TRAINING SCHOOLS.

During the time that the county training schools have been in existence the teachers in these schools and the county superintendents have had a good opportunity to study the best ways of improving the country schools through the training of teachers. Every year some improvements have been made, either in the courses of study, in the selection of the material taught in the various branches, or in the method of teaching the subject matter. The following are some of the suggestions for improvement that have been made:

1. The standard of admission to the regular work of the training school should be raised whenever the conditions make it possible. One of the weaknesses of the training-school work is the immaturity of the students. Some of the schools have done a great deal toward urging immature and poorly prepared students to take further preparatory work in some other school.

2. The consensus of opinion seems to be that the training-school course is not comprehensive enough. The lengthening of the course seems to be generally desirable. The course was increased from one year to two years soon after the schools were established, and many are now considering the feasibility of making the course three years or of requiring an entrance preparation equivalent to two years beyond the elementary school.

The fact should be kept constantly in mind, however, that the material given in the training school should be of such a nature that it will make the teachers strong in their teaching rather than supply what is merely professional or cultural.

3. In the introduction of industrial work, care should be taken to secure instructors who have had successful experience in adapting the work of the schoolroom to the needs of home life. It is possible to make these so-called practical subjects impracticable and thus occasion much waste of time, both in the training school and in the country school.

4. The training school should do all that it possibly can to broaden the interests of the students. Few of them have had the opportunity to see much of life outside of their immediate environment. Whenever possible, students should be taken to institutions of various kinds in order that they may see how things are done. Visits to

manufacturing establishments, printing houses, Government offices, etc., are exceedingly valuable.

5. The observation and the practice work should be strengthened. As far as possible the students should observe good teaching. If the students see the work of teachers who are doing only mediocre work, the chances are that their standards will be low. In this observation and practice work country conditions should be kept in mind. Where the students do their observation work in city grades, care should be taken to select for observation teachers that know how to make the best use of the time.

6. The training schools should give some time to preparing students for leadership in country communities. It is not to be expected that these young people will be able to take charge of community organizations on an extensive scale, but much can be done to instruct them in ways of getting the people of the community interested in the school. A bulletin entitled "Social and Civic Center Work in Country Communities" has been used by the training schools and forms a basis for further instruction. The training school should not be satisfied merely to graduate young people who are able to teach the academic subjects fairly well, but they should have some definite knowledge as to what may be done to get the community to realize the true value of the school.

7. Institutions that train teachers for school work should aim to give their students knowledge regarding school buildings, school equipment, sanitation, and the like. Too often the teacher can give no satisfactory information concerning school furniture, blackboards, etc. The training schools should give their students this information.

OTHER INSTITUTIONS IN WISCONSIN PREPARING TEACHERS FOR COUNTRY SCHOOL WORK.

1. *Normal schools.*—There are at present in Wisconsin six State normal schools giving courses for the training of teachers for country schools. Data regarding these courses are given in the tabulation on page 38.

At Whitewater and Stevens Point the students taking the training course for rural teachers have a separate assembly room under the immediate charge of the director of the course. At the Whitewater school the director has an assistant, and the two teachers do most of the work in this department, the students going to the other teachers of the faculty for music, domestic science, manual training, drawing, and agriculture.

At Stevens Point the students take part of the other branches under the members of the regular normal school faculty, but the professional work is done by the director of the course.

In the other schools the students are seated in the same room with the rest of the students of the normal school. The professional work is done by the director of the course, but the academic work is taken with the regular teachers of the normal school faculty.

The courses of study in these departments are similar to the courses of study offered in the county training schools. Students with sufficient preparation may finish the work in a year, while others are required to take two years.

The directors of the rural school courses, like the principals of the county trading schools, work with the county superintendents of the counties in which the schools are located (and also neighboring counties) in trying to advance the interests of the county schools. The diplomas received upon the completion of these courses of study are equivalent to the diplomas received upon the completion of a county training school, but are limited to the county in which the normal school is located. The standings received at the school may be accepted by county superintendents anywhere in the State in granting certificates.

The rural school course at Oshkosh was discontinued in 1915.

State normal schools of Wisconsin having special courses for the training of rural teachers.

State normal schools.	Director of course.	Year established.	Enrollment, 1913–14.	Number of graduates.						Graduates teaching in 1913–14.
				In 1910.	In 1911.	In 1912.	In 1913.	In 1914.	Total.	
Whitewater	G. A. Schmidt	1909	42	2	3	16	17	23	61	38
La Crosse	J. R. Moore	1909	51		15	15	21	23	74	34
River Falls	Jas. I. Malott	1910	103			8	23	38	69	[1] 22
Oshkosh	E. E. Robey	1910	44		11	14	21	15	61	[1] 14
Stevens Point	O. W. Neale	1912	71				11	33	44	11
Platteville	J. C. Brockert	1914								
Total[2]			311	2	29	53	93	132	309	11

[1] Complete data not available.

[2] The total number of graduates in 1915 was 149.

2. *High schools.*—In 1913 the legislature enacted a law providing that after July 1, 1915, all persons entering upon the work of teaching must have had at least two years' schooling beyond the elementary course and that one of these years must be professional training. In order to provide a sufficient supply of teachers for the schools of the State when this law should go into effect, another measure was enacted providing for the establishment of teachers' training courses in certain high schools of the State. The following summary gives the principal features of this law:

1. Any free high school or high school having a course of study equivalent to a free high school and having four or more teachers, may establish a teachers' training course, *except that*—

2. Such schools *can not* be established in counties already having county training schools for teachers.

3. The courses of study and the qualifications of teachers must be approved by the State superintendent.

4. These courses must be administered for a period of not less than nine months during the school year ending June 30.

5. Any teacher employed to give instruction in the professional work and practice teaching shall be a graduate of the advanced course of a Wisconsin State normal school, or a school offering a course of study equivalent to the course of study offered in the Wisconsin State normal schools, and shall, in addition, present evidence of at least two years of successful experience.

6. Such teacher must devote full time to the work of the training course.

7. At least 10 persons must elect to take such course during the current year.

8. The work shall meet the approval of the State superintendent and reports must be made to him.

9. The certificate of graduation qualifies the holder to teach and shall, upon evidence of successful teaching for at least seven school months, when countersigned by the county superintendent of the county in which the training school is located, legally qualify the holder to teach in that county for a period of five years from the date when such certificate was granted, and shall also be a legal qualification to teach in any department of any State graded school in that county, the principalship of a State graded school of the first class excepted. Standings on certificates of graduation from an approved training course may be accepted by any county or city superintendent in place of actual examination under certain conditions.

10. If the administration of such training course meets the approval of the State superintendent, the State will aid to an amount equal to the sum expended for the salary of the duly qualified and approved teacher employed in this department. This special aid is apportioned as is other special State aid; that is, the teachers are paid by the district as other teachers are paid. The amount as above will be refunded at the time of the apportionment of special State aid.

Under this act 27 high schools of the State introduced teachers' training courses in the fall of 1913. The following table shows the enrollment in these courses during the year 1913–14 and the number of graduates in June, 1914. Since this is the first year the courses were established, the number of graduates is small. Only those students who had finished or almost finished the high-school course previous to 1913 could complete the work in one school year. A few of the high schools had introduced a teachers' training course before the law was enacted, and for this reason had a considerable number of students who were ready to complete the work the first year.

The annual appropriation by the State for these courses in the high schools is $25,000.

Wisconsin high schools in which teachers' training courses have been established.

Location o schools.	Counties.	Enrollment, 1913-14.			Graduates, 1914.		
		Male.	Female.	Total.	Male.	Female.	Total.
Black River Falls	Jackson	0	26	26	0	1	1
Chilton	Calumet	3	13	16	0	0	0
Chippewa Falls	Chippewa	0	41	41	0	15	15
Crandon	Forest	3	8	11	0	0	0
Darlington	Lafayette	0	22	22	0	0	0
Dodgeville	Iowa	0	26	26	0	3	3
Ellsworth	Pierce	0	24	24	0	2	2
Fennimore	Grant	0	13	13	0	1	1
Florence	Florence	1	15	16	0	0	0
Galesville	Trempealeau	3	36	39	0	5	5
Grantsburg	Burnett	2	13	15	0	1	1
Green Bay	Brown	0	21	21	0	0	0
Hayward	Sawyer	2	11	13	0	0	0
Jefferson	Jefferson	1	30	31	1	3	4
Mayville	Dodge	1	19	20	0	8	8
Neillsville	Clark	2	16	18	0	1	1
New Richmond	St. Croix	0	36	36	0	8	8
Omro	Winnebago	0	25	25	0	66	6
Plymouth	Sheboygan	6	30	36	2	17	19
Ripon	Fond du Lac	2	27	29	0	1	1
Shawano	Shawano	1	10	11	1	2	3
Spooner	Washburn	1	14	15	0	2	2
Stoughton	Dane	1	23	24	0	5	5
Tomah	Monroe	0	30	30	0	4	4
Washburn	Bayfield	0	27	27	0	7	7
Waukesha	Waukesha	3	9	12	0	1	1
Westfield	Marquette	2	21	23	0	0	0
Total[1]		34	586	620	4	93	97

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[1] The total enrollment for the year 1914-15 was 758. Of these, 59 were men and 699 women. There were 265 graduated—19 men and 246 women.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1916, NO. 18

PUBLIC FACILITIES FOR EDUCATING THE ALIEN

PREPARED IN THE DIVISION OF IMMIGRANT EDUCATION

BY

FREDERIC ERNEST FARRINGTON
BUREAU OF EDUCATION

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, August 10, 1916.

SIR: In 1910 there were in the United States more than thirteen millions of foreign-born men, women, and children, and more than four-fifths of those coming in that year were from southern and eastern European countries and other countries in which the percentage of illiteracy is very large. Nearly three millions of these foreign-born men, women, and children over 10 years of age were unable to speak the English language, and more than one million six hundred thousand were unable to read and write in any language. The four years following the census year of 1910 added largely to all these classes, the average immigration for these years being more than one million annually. The tide has receded since the beginning of the war in Europe, but it will probably attain its former level and more when the war is over.

For their good and our own we may not let these people remain among us either as citizens or aliens without giving them adequate opportunity and every proper inducement to learn the language of the country and whatever else may be necessary to enable them to understand the best in American social, industrial, and civic life. A general feeling of the importance of this problem has given rise to three questions:

1. What is now being done for the education of those who come to our shores after having passed the age of compulsory school attendance?
2. What should be done for them?
3. How can it best be done?

To help toward the answer of the first of these questions, I recommend the publication of the accompanying manuscript, prepared by Dr. Frederic Ernest Farrington, of the Division of Immigrant Education in this bureau. Other manuscripts intended to assist in answering the second and third of these questions are in preparation and will be submitted for publication later.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

PUBLIC FACILITIES FOR EDUCATING THE ALIEN.

Chapter I.

THE PROBLEM.

Census returns in the last two decennial reports have brought out with increasing force the growing importance of the alien problem.[1] Every citizen of the United States to-day is an immigrant or the descendant of an immigrant. Proximity to the ocean-crosser in point of time is the chief factor which fixes the position of each one in the categories of the census classification.

A century and a half ago it was finally determined that English should thenceforth be the language of the land. From the beginning of the colonial period English had been the language of the great majority of the arrivals from across the sea, and it continued so to be for many years thereafter. Subsequent arrivals for many decades accepted unquestioningly the responsibility of learning the language of their adopted country. So long as the newcomers were of Teutonic stock the problem of educating the aliens presented no particular difficulty. They all came from countries where learning occupied an honorable place in the minds of the common people, and the problem of illiteracy was almost negligible. In fact in some of the countries it was only a small proportion of what it was among the native-white population of America at the same time.

With the change in the character of the immigrant tide, however, when immigrants began to come from southern and eastern Europe, new difficulties presented themselves. In the decade 1851-1860, the arrivals from southern and eastern Europe formed only about 5 per cent of the total number of immigrants. In the following decade this proportion had doubled; in another decade it had doubled again; and then for 20 years it remained almost stationary. Reduced to figures, this means 5 per cent in 1851-1860; 11 per cent in 1861-70; 26 per cent in 1871-1880; and 28 per cent in 1881-1890. Then the flood from eastern and southern Europe burst forth with increased force, nearly doubling in the following decade; and finally, in the decade 1901-1910, it increased nearly by half.

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[1] Table 1 shows the number of foreign-born whites, in each State, together with their per cent of the total population.

This change is shown schematically in the subjoined diagram:

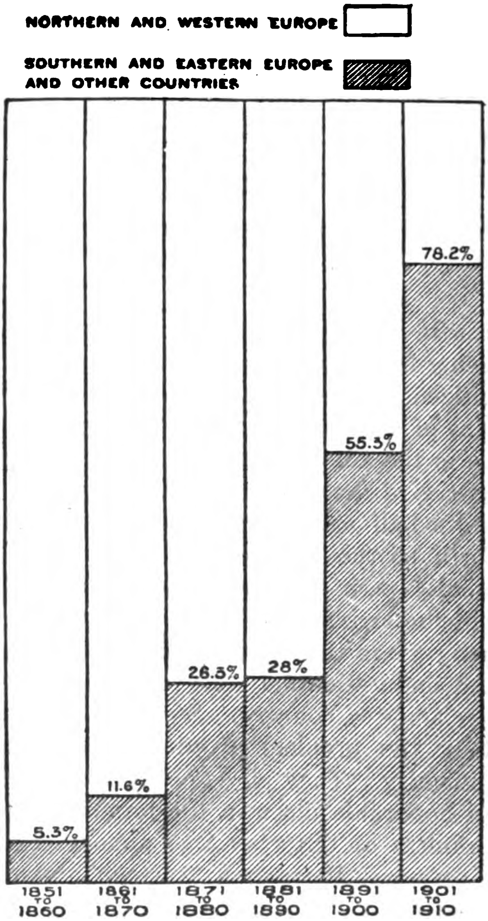

DIAGRAM 1.—Immigration into the United States, 1851-1910, showing per cent of increase from the less literate nations.

Thus in the decade, 1891-1900, well over half the immigration tide arose in the countries of southern and eastern Europe, and 10 years later these same countries were responsible for over three-fourths of our new arrivals. It is not surprising, therefore, that the sense of responsibility for acquiring a facility in the use of English changed inversely as the number of immigrants from the less literate nations. In 1890 over half the population of one of the kingdoms of the Dual Monarchy, from which a considerable proportion of immigrants comes, were classed as illiterate. Statistics for 1910 show this figure still to be over 33 per cent. Other illiteracy figures for that eastern section of Europe range from Austria with 13.7 per cent, Roumania with 60.6 per cent, and Russia with 69 per cent, to Servia with 78.9 per cent of her population unable to read and write their own language.

If it is justifiable to assume that the literacy of the immigrants from these countries is measured by that of the population of the countries, it is evident that the United States must assume an additional burden in return for economic aid derived from their labor in order to raise these newcomers to the literacy level of its own people, which at best is quite too low even for the native-born whites.

According to the census of 1910,[1] there were 1,650,361 foreign-born whites over 10 years of age who could not read or write in any language, a number representing 12.7 per cent of the entire foreign-born white population of the country.[2] In contrast with the illiteracy among the native whites, 3 per cent, this figure is disquietingly large.

When inability to speak English is considered, an even more serious situation is disclosed, for in 1910 practically three million foreign-born white persons in the United States 10 years of age and over (to be exact, 2,953,011) were ignorant of the language of the country.[3] While it is true that some of these were merely sojourners in the land who would ultimately find their way back whence they came,[4] it is evident that during their stay in the United States they are subject to the laws and regulations of the country and must be held responsible for obeying these laws and regulations. Even though they may feel no personal need for acquiring English the welfare and safety of the Nation make it imperative that this obligation be forced upon them. The more these foreigners settle in groups among their own kind, the less likely are they to learn English of their own accord, and the more necessary does it become that municipal, State, or National authorities begin seriously to consider the problem.

In 1910 the 2,953,011 foreign-born white persons in the United States 10 years of age and over who were unable to speak English represented 22.8 per cent of th [illegible] foreign-born population of the country. While thes [illegible] s [illegible] roughout all the States of the Union, they are [illegible] e northeastern quarter of the country. Mo [illegible] hem are in the States of New York, Penn [illegible] sachusetts, Ohio, New Jersey, T [illegible] With the exception of Texas, the [illegible] d east of the Mississippi.

[illegible] ares [illegible] tion, size of communities, illiteracy, [illegible] Uni [illegible] ed upon the returns of the census for

[illegible] whi [illegible] tates, see Table 2, p. 33.

[illegible] En [illegible] born whites for the various States, se

[illegible] nts about one-third the total numb

Each of them has more than 100,000 non-English-speaking foreigners, with numbers ranging from 102,000 in Michigan to 597,000 in New York. Whereas these States have 67.6 per cent of the total foreign-born white population of the country, they have 73.6 per cent of those unable to speak English. In other words, these figures would seem to strengthen the assumption that massed groups of foreigners engender a disinclination to learn English. As numbers increase, the problem increases in more than arithmetical ratio. Census figures, which show that the number of persons unable to speak English increased 1,735,731 between 1900 and 1910, or 142.6 per cent, as opposed to an increase of 29.3 per cent in the total number, should therefore provide food for serious thought.

Consideration of the age distribution of these people suggests an even more serious condition, for of the nearly three million who can not use the English language as a medium of communication, 2,565,612 are over 21 years of age, in other words, well beyond the compulsory school-attendance age and therefore beyond the period when in the ordinary course of events they are likely to attend school in order to acquire the common-school branches. Of the two and one-half million over 21 years of age who can not speak English, only 35,614 are in school, a paltry 1.3 per cent.[1] This situation is shown graphically and forcefully in the following diagram:

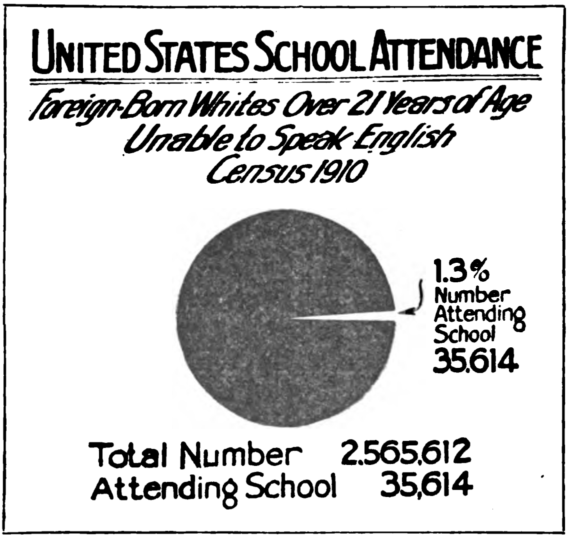

DIAGRAM 2.

Handicapped by a language disability, they not only find barriers in the way of securing ready employment, but they fall into the hands of more or less unscrupulous fellow countrymen who exploit their language ignorance, or they become a ready prey to the agitator of smooth speech and are thus likely to become a menace to the welfare of both Commonwealth and Nation.

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[1] For figures showing school attendance among foreign-born whites by age groups for the various States, see Table 4.

The immediate significance of this is suggested by a study of the per cent of males of militia age (18 to 44 years) in New England. The figures in the following table are represented graphically in the diagram shown below:

Total males of militia age (18 to 44 years) in New England.

Classes.	Number.	Per cent.
Native parentage	510,616	34.3
Negro and others	20,271	1.4
Foreign or mixed parentage	356,428	24.4
Foreign-born white	581,585	39.9

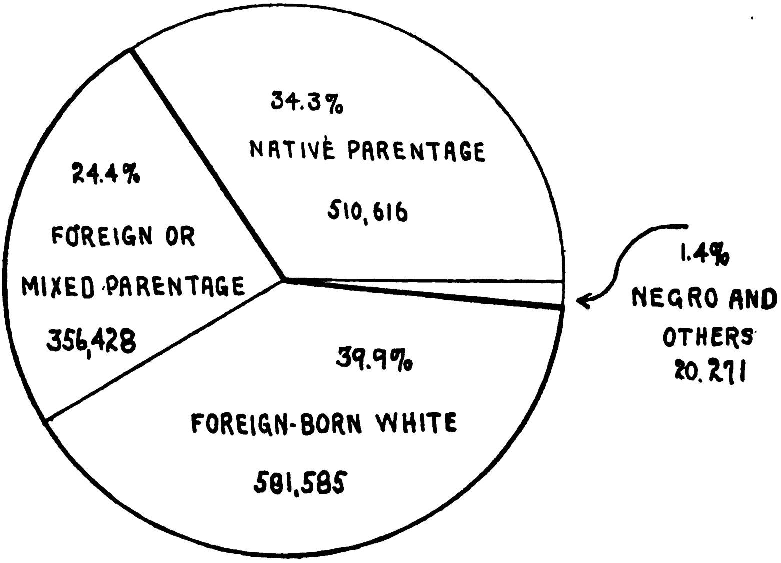

DIAGRAM 3.—Distribution of males of militia age (18 to 44 years) in New England according to nativity and parentage.

Only less striking are the corresponding data for the Middle Atlantic States.

Since complete citizenship should be the ultimate desire of every foreigner who settles in the country permanently, there is an added reason for putting the acquisition of the speech of the land within reach of all, for according to Federal regulations ability to read and speak English is demanded before the rights and privileges of citizenship may be conferred.

Chapter II.

LEGAL ASPECTS.

Public schools are universal throughout all the States of the Union. They have been established in response to the deep-seated conviction that education is essential for individual happiness and efficiency, for civic welfare, and for national prosperity. This conviction has been embodied in constitution and statute in order to guarantee the continuance of a system of schools for the people of the land, and to-day scarcely a hamlet in the whole country lacks facilities for providing the youth with the means for further material, intellectual, and spiritual progress.

"People" in the sense above, however, has contemplated the American people. It is only when one realizes that not all the people of this country are fundamentally American, with American standards and American ideals, that it becomes apparent that the United States has a large group of residents who are not affected by the educational organization established by the fathers. Whereas the law has safeguarded the native population, what provision does it make for assuring that the foreigner should have an educational equipment comparable to that within reach of the native born, at least to the minimum safety limit imposed upon the native population?

From the legal standpoint, immigrant education deals with three quite distinct groups: (1) Children who come within the provisions of the compulsory school-attendance law (usually up to 14 or 15 years); (2) youth of both sexes between the close of the compulsory school-attendance period and the close of the school-age period (18, 20, or 21 years, according to the State); and (3) all above the age limits just indicated, who may be termed adults from the school-age point of view.

Children of the first group present no peculiar problem. They are taken care of more or less effectively by the compulsory school-attendance law, which affects all children alike. In communities where the machinery for the enforcement of this law is not altogether efficient, undoubtedly too many escape entirely, especially if they come in toward the end of the compulsory period. Under a cooperative arrangement between the United States Bureau of Education and the Bureau of Immigration of the Department of Labor, commissioners of immigration at the ports of entry are notifying the various school authorities throughout the country of the arrival of immigrant children between the ages of 4 and 16 years whose destination falls within the jurisdiction of these school authorities. Besides the name of the child, facts are furnished to facilitate identification.

In this way the machinery will be set in motion to enable local school authorities to learn almost immediately of the arrival of alien children within their midst and thus make it possible to bring these children into school before they are spirited away into unlawful employment. Once the law lays its hands upon such children, the chances are good that they can be kept long enough to acquire at least a working knowledge of English and some appreciation of civic life. Delay of even a few months, however, may immensely decrease the chances of Americanizing these children. Everything now depends upon the local school authorities. Vigilance on their part is bound to result in incalculable good, while indifference dooms the effort to failure.

In normal times, about 160,000 children between the ages of 5 and 16 enter the United States annually, 80 per cent coming from the non-English-speaking countries of southern and eastern Europe, particularly from southern Italy, from Poland, Hungary, Russia, and other adjoining States. Unless these children come early into contact with American ideals through the school system, they are likely to prove unfit for American citizenship.

For those who fall within the second category, from the close of the compulsory school-attendance period to the upper reaches of the school-age period, very little legislation is applicable. Massachusetts forms a conspicuous exception to the general rule, since for nearly 30 years there has been a law upon her statute books requiring illiterate minors over 14 years of age to attend some school if they have lived for a year in a city or town which maintains an evening school, although not until 1898 was instruction in the English language added to the list of subjects which must be offered in these schools. Beginning with 1906, the standard of literacy was fixed by legislation, a graduated scale being established, so that in 1908 and thereafter literacy was interpreted to mean such ability to read and write as is required for admission to the fourth grade. Five years later this was increased to the completion of the fourth grade.

Labor legislation of 1909 made this law more drastic by prohibiting the employment of any minor coming within the purview of this education law, unless he were attending a public evening school. Furthermore, in accordance with State law, any town may maintain, and every city or town in which labor certificates are granted to 20 or more persons within a year to whom this illiteracy law applies, shall maintain an evening school during the following year. In effect, then, this legislation reaches every illiterate minor as defined above between 16 and 21 years of age, employed or unemployed, married or single, living in a community where evening schools are maintained. No other State has done so much to eliminate illiteracy. At best, however, many are bound to escape, for according to the most trustworthy statistics available on March 1, 1916, for the year 1914–15, there were 23 communities in the State each having over 5,000 inhabitants and over 1,000 foreign-born whites where no evening schools were found, in one of which, according to the census returns for 1910, the foreign-born whites comprised 47 per cent of the population. More striking still is the fact that 3 of the 23 communities had over 10,000 inhabitants.

Connecticut likewise has a mandatory provision in its education law for the establishment of evening schools, every town having a population of 10,000 or more being required to establish and maintain such schools for the instruction of persons over 14 years old. Furthermore, in towns where evening schools are found, illiterates between 14 and 16 years may not be in employment save on condition that they have been in regular attendance at evening school during the preceding month.

New York, in its cities of the first and second class, may require all persons between 14 and 16 years of age who have work certificates and who have not completed the elementary school course to attend part-time, or continuation, or evening schools, but the imposition of this requirement is optional with the community.

Permissive provisions for the establishment of evening schools are furthermore found in the education laws of several States; to wit, California, Georgia, Kansas, Missouri, New Jersey, New York, Ohio, Pennsylvania, Vermont, and Wisconsin. Nearly all the so-called immigration States are thus covered, Illinois, the most significant exception, reaching illiterates between 14 and 16 years of age through the medium of labor legislation. In that State attendance at night school may be accepted in lieu of passing the literacy test.

Permissive legislation, however, seldom accomplishes its purpose, and there is little reason to believe that these States in this regard form any exception to the general rule. The following figures for the principal immigration States (i. e., all those having over 500,000 foreign-born whites) will support this assertion:

Number of evening schools in the principal immigration States (i. e., States with over 500,000 foreign-born whites).

States.	Number of foreign-born whites.	Number of urban centers[1]—		Number of evening schools in 1914–15.[2]
		With over 2,500 inhabitants.	With over 1,000 foreign-born whites.	
New York	2,729,272	148	71	41
Pennsylvania	1,436,719	263	127	42
Illinois	1,202,560	144	32	19
Massachusetts	1,051,050	152	117	65
New Jersey	658,188	88	61	30
Ohio	597,245	139	40	20
Michigan	595,524	77	43	19
Minnesota	543,010	48	32	8
California	517,250	70	30	9
Wisconsin	512,569	73	38	19
Total	....	1,202	591	272

[1] United States census, 1910.

[2] Figures up to Mar. 8, 1916, from data on file at the Bureau of Education, Division of Immigrant Education.

While the figure 1,000 foreign-born whites gives a more or less arbitrary dividing line, it appeared advisable to establish some definite basis for differentiation, and this seemed a convenient division point. One should not conclude that every community above this limit has an acute alien problem, and that in no case below this figure is there crying need for educational facilities to care for the foreign born. On the other hand, the number of foreign born does not give an accurate measure of the need. Maynard, Mass., with 3,002 foreign-born whites out of a total population of 6,390 and no evening school, has a distinctly more serious problem to face than Savannah, Ga., with 3,382 foreign-born whites out of 65,064, likewise without an evening school, or Evansville, Ind., with 4,462 foreign-born whites out of 69,647 and no evening classes for foreigners. In the majority of instances, however, it is fair to say that 1,000 foreign-born whites in any community deserve some evening school facilities, especially since more than one in five of these on the average will be unable to speak English, according to the figures for the country as a whole at the time of the 1910 census.

According to the foregoing table, about half the cities (following the census nomenclature that every community of 2,500 and over is classed as urban) covered by these figures have as many as 1,000 foreign-born whites, and less than half of these cities provide evening-school facilities. It is evident, therefore, that permissive legislation for the establishment of evening schools offers slight guarantee that the schools will actually be provided.

One may safely conclude that the age group 10 to 14 years of the foreign-born white population unable to speak English, representing

56,405 for the whole country, will be adequately taken care of by the school machinery already in existence. This conclusion is still further strengthened by the fact that 86.1 per cent of the total foreign-born white population within that age group (10 to 14) are in school. As age increases, the foreign-born white child is less and less likely to be found in school. Linguistic difficulties make it improbable that he will be found in any of the regular schools, and the table on page 36 shows that special opportunities, as measured by the prevalence of evening schools in the 10 States under consideration, are totally inadequate. In fact less than half the communities in the immigration States provide evening-school facilities for the alien.

For those of 21 years of age and over unable to speak English, the problem is acute and distressing. With 2,565,612 foreign-born white persons who fall within this age group in the country in 1910 suffering from this disability, and only 35,614 foreign-born white adults in school, or 1.3 per cent, it is evident that practically no aliens are making any systematic effort to acquire the English language. Since it is not certain that all these 35,000 are drawn from the non-English-speaking group, the real facts are probably even worse than the figures would seem to indicate.

Undoubtedly present facilities are already available for increasing by manyfold this insignificant number enrolled in school. The successful campaigns undertaken in cities like Detroit and Syracuse under the inspiration of the National Americanization Committee and with the valued support of the chambers of commerce justify this assertion. Unsatisfactory attendance upon evening classes is partly due to ignorance on the part of the foreign-born population as to the facilities for education that may be had for the asking. This can, of course, be remedied by awakening public sentiment to the necessity of bringing these opportunities to the attention of the foreigner through Americanization meetings, citizenship addresses, publicity campaigns in the various foreign languages, and the like, but even when all those means have been exhausted, there is still much to be done.

In many instances education laws themselves need to be changed, and in some cases even the State constitution. California is the only State in the Union which mentions evening schools by name in its constitution:[1] "The public-school system shall include day and evening elementary schools and such day and evening secondary schools * * *."

Missouri does this in effect when it grants to the general assembly the right to "establish and maintain free public schools for the gratuitous instruction of all persons in this State between 5 and 6 years of age and over 20 years of age."

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[1] The following material relating to constitutional and legislative provisions for evening schools is based largely upon Hood, W. R., "Digest of State Laws Relating to Public Education," Bureau of Education, Bulletin No. 47, 1915.

In some States constitutional provisions militate seriously against the establishment of free evening schools for adults, unless the community is prepared to support them entirely from its own resources. This barrier operates indirectly in those States which provide for free schools for the gratuitous instruction of all residents between certain ages, as in Colorado. It becomes effective in others by implication, as in South Dakota, where the school fund is distributed according to the number of children of school age. In still other States, the same result is reached more directly and positively, as in the case of Iowa, where the school fund is distributed on the basis of youth between the ages of 5 and 21 years. The following 20 States have such limitations: Alabama, Arizona, Arkansas, Colorado, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Montana, Nebraska, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, South Carolina, South Dakota, Wyoming.

The following are extracts from the constitutions embodying these provisions:

Alabama.—Art. XIV, sec. 256: The legislature shall establish, organize, and maintain a liberal system of public schools throughout the State for the benefit of the children thereof between the ages of 7 and 21 years. The public-school fund shall be apportioned to the several counties in proportion to the number of school children of school age therein * * *.

Arizona.—Art. XI, sec. 6: The legislature shall provide for a system of common schools by which a free school shall be established and maintained in every school district for at least six months in each year, which school shall be open to all pupils between the ages of 6 and 21 years.

Sec. 8. The income derived from the investment of the permanent State school fund and from the rental derived from school lands, with such other funds as may be provided by law, shall be apportioned annually to the various counties of the State in proportion to the number of pupils of school age residing therein.

Arkansas.—Art. XIV, sec. 1: The State shall ever maintain a general, suitable, and efficient system of free schools whereby all persons in the State between the ages of 6 and 21 years may receive gratuitous instruction.

Colorado.—Art. IX, sec. 2: The general assembly shall, as soon as practicable, provide for the establishment and maintenance of a thorough and uniform system of free public schools throughout the State wherein all residents of the State between the ages of 6 and 21 years may be educated gratuitously.

Iowa.—Art. IX, Part II, sec. 7: The money subject to the support and maintenance of common schools shall be distributed to the districts in proportion to the number of youths between the ages of 5 and 21 years, in such manner as may be provided by the general assembly.

Kansas.—Art. VI, sec. 4: The income of the State school funds shall be disbursed annually, by order of the State superintendent, * * * in equitable proportion to the number of children and youth resident therein between the ages of 5 and 21 years.

Kentucky.—Sec. 186: Each county in the Commonwealth shall be entitled to its proportion of the school fund on its census of pupil children for each school year.

Louisiana.—Art. 248: There shall be free public schools for the white and colored races, separately, established by the general assembly, throughout the State, for the education of all the children of the State between the ages of 6 and 18 years. * * * All funds raised by the State for the support of public schools, except the poll tax, shall be distributed to each parish in proportion to the number of children therein between the ages of 6 and 18 years.

Minnesota.—Art. VIII, sec. 2: And the income arising from the lease or sale of said school land shall be distributed to the different townships throughout the State, in proportion to the number of scholars in each township, between the ages of 5 and 21 years.[1]

Mississippi.—Art. VIII, sec. 206: The common school fund shall be distributed among the several counties and separate school districts in proportion to the number of educable children in each.

Montana.—Art. XI, sec. 5: The interest on all invested school funds of the State, * * * shall be apportioned to the several school districts of the State in proportion to the number of children and youths between the ages of 6 and 21 years, residing therein respectively.

Nebraska.—Art. VIII, sec. 6: The legislature shall provide for the free instruction in the common schools of this State of all persons between the ages of 5 and 21 years.

New Mexico.—Art. XII, sec. 1: A uniform system of free public schools sufficient for the education of, and open to, all the children of school age in the State shall be established and maintained.

North Carolina.—Art. IX, sec. 2: The general assembly * * * shall provide by taxation and otherwise for a general and uniform system of public schools, wherein tuition shall be free of charge to all the children of the State between the ages of 6 and 21 years.

North Dakota.—Art. IX, sec. 154: The interest and income of this fund * * * shall be faithfully used and applied each year for the benefit of the common schools of the State, and shall be for this purpose apportioned among and between all the several common-school corporations of the State in proportion to the number of children in each of school age, as may be fixed by law.

Oklahoma.—Art. XIII, sec. 1: The legislature shall establish and maintain a system of free public schools wherein all the children of the State may be educated.

Oregon.—Art. VIII, sec. 4: Provision shall be made by law for the distribution of the income of the common-school fund among the several counties of the State in proportion to the number of children resident therein between the ages of 4 and 20 years.

South Carolina.—Art. XI, sec. 5: The general assembly shall provide for a liberal system of free public schools for all children between the ages of 6 and 21 years.

South Dakota.—Art. VIII, sec. 3: The interest and income of this fund * * * shall be for this purpose apportioned among and between all the several public-school corporations of the State in proportion to the number of children in each of school age, as may be fixed by law.

Wyoming.—Art. VII, sec. 8: Provision shall be made by general law for the equitable distribution of such income among the several counties according to the number of children of school age in each.

Sec. 9. The legislature shall make such further provision, by taxation or otherwise, as with the income arising from the general school fund will create and maintain a thorough and efficient system of public schools, adequate to the proper instruction of all the youth of the State, between the ages of 6 and 21 years, free of charge.

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[1] But, see legislative enactment infra, p. 19.

State school laws supplement and apply the constitutional provisions. These are summed up for the 10 principal immigration States in the following digest:

California.—Cities are generally administered under separate charter wherein are defined the powers and duties of school boards. In cities of the fifth class, school boards are granted general authority to establish evening schools.

Illinois.—Night schools are recognized in the child-labor law. Attendance at such schools is recognized as satisfying the provision of the law prohibiting the employment of any child between 14 and 16 who can not read and write.

Massachusetts.—Any town may and every city or town in which there are issued during the year of September 1 to August 31 certificates authorizing employment of 20 or more persons who do not possess the educational qualifications enumerated in the compulsory attendance law of the State shall maintain during the following school year an evening school for instruction of persons over 14 years old in orthography, reading, writing, the English language and grammar, geography, arithmetic, industrial drawing (both free-hand and mechanical), the history of the United States, physiology and hygiene, and good behavior; such other subjects may be taught as may be determined by the school committee.

Michigan.—No statement, direct or otherwise.

Minnesota.—School board of independent district may also provide for admission of nonresident pupils and those above school age and fix tuition of such pupils. * * * Such boards may also establish and maintain evening schools for persons over 10 years old unable to attend day school and receive State aid for same.

New Jersey.—Board of education of any district may maintain evening schools for education of residents over 12 years old; * * * Said board may establish and maintain a public evening school for instruction of foreign-born residents over 14 years old in the English language and in government and laws of New Jersey and of the United States; teachers in such schools must hold special teachers' certificates; * * * course of study in such school must be approved by State board. Each district maintaining evening school or schools shall receive from the State for such school or schools an amount equal to that raised by the district, such aid not to exceed $5,000 per year for any district.

New York.—Board of education of each school district and of each city may maintain free night schools.

Ohio.—Upon petition of parents or guardians of not less than 25 school children who are prevented from attending day school, the school board in any district shall organize an evening school; teachers for such schools must hold regularly issued teachers' certificates; board may discontinue such school when average attendance falls below 12; any person over 21 years old may be permitted to attend the evening school upon payment of tuition. The schools of each district shall be free to all youths between 6 and 21 years of age resident therein.

Pennsylvania.—The board of school directors of any district of second, third, or fourth class, upon application of parents of 25 or more pupils above 14 years, shall open a free evening school for instruction in spelling, reading, writing, arithmetic, and such other subjects as board may determine; evening schools shall be kept open for at least 4 months per year, 20 days a month, and 2 hours each evening; no student shall be admitted unless employed during the day; evening schools may be closed when the average attendance falls below 15. Boards may admit persons under 6 and over 21 to suitable special or vocational schools.

Wisconsin.—Every community of over 5,000 inhabitants must and every one of less than 5,000 may have an industrial education board, a part of whose duties shall be the fostering, establishing, and maintaining of evening schools. Such school must be established on petition of 25 persons qualified to attend such school.

Chapter III.

PRESENT CONDITIONS.

Some indication has already been given of the prevalence of evening schools in the chief immigration States, in consequence of the permissive legislation existing on their statute books. It is pertinent to discuss in some detail the specific conditions under which these schools are actually administered.

The following information is based upon questionnaire returns sent in by school administrative officers for the year 1914-15. Inquiry from the Bureau of Education brought in a wealth of valuable information from almost all the more important cities and towns in the country where evening schools for foreigners were successfully maintained. While certain details have necessarily been omitted, the returns were unusually complete, and it is safe to conclude that the most significant characteristics of evening-school management are embodied herein.

SUPPORT.

Eleven of the States make grants for evening-school support, to wit: California, Connecticut, Indiana (vocational), Maine, Minnesota, New Jersey, New York, Pennsylvania (industrial), Rhode Island, Washington, Wisconsin.

California.—Evening schools are part of the general school system. State aid is based upon average daily attendance in day and evening schools. A day's attendance, two hours, in an evening school is equivalent to a half-day's attendance in a day school. Inasmuch as the attendance unit in 1914–15 was worth $15 per year per pupil, this amounted to one-half of $15 for evening-school attendance.

Connecticut.—To each town supporting an evening school the State grants $2.25 per pupil in average attendance, provided the school has been maintained for 75 nights and a report upon such school has been rendered to the board.

Maine.—The State reimburses the city to the extent of two-thirds of the amount expended for salaries of teachers, provided certain vocational subjects are also offered in the school. General evening-school instruction is thus supported through a rider on the industrial education act.

Minnesota.—State grant is available for evening-school pupils between 5 and 21 years, provided they have attended 40 nights or more. Only 2 out of 10 cities reporting note any State aid, and the amounts received in 1914–15 were $200 and $2,154, respectively. Schools are opened, however, to all persons over 10 years of age who for any cause are unable to attend the public day schools.

New Jersey.—State grants $80 per teacher for each one who holds a regular teacher's certificate and who teaches at least 64 evenings of two hours each. There is also a per capita allowance based upon attendance. An evening attendance is reckoned as a half-day's attendance. Inasmuch as this is apportioned from a lump appropriation, the per capita amount varies from year to year. In case the local board so elects, the State will duplicate the local appropriation for evening classes for foreign-born residents in lieu of the grant above noted, not, however, to exceed $5,000 annually. Complaint is made that this law really provides aid for only small communities. In large systems it is claimed that the city actually loses money by taking advantage of the law.

New York.—There is no specific appropriation for ordinary night schools, although aid is apportioned on the basis of the number of teachers and the number of days they teach under the regular State grant system. For each 180 days or more taught during the year $100 is allowed, and a night is regarded as half a day. Purely vocational schools are aided on a separate basis.

Rhode Island.—State aid is granted on the basis of half the amount expended up to $1,000; then $100 for each additional $500 expended up to $3,500. The maximum amount in any one case is therefore $1,000. In 1915 the State had only $7,000 to distribute, however, so that even this schedule can not always be paid in full.

Washington.—Current school funds of State and county are apportioned among the several districts of the State according to the actual number of days' attendance of all pupils. For the purpose of this distribution an evening's attendance in the evening school is counted as a half day. Sessions must be two hours in length and there must be no maximum age limit.

Wisconsin.—State reimburses city for one-half actual expenditures for evening schools up to a maximum allotment of $3,000, provided the schools are maintained for at least eight months and that the work is satisfactory to the State superintendent and the State board of industrial education. No tuition may be charged to residents, and schools are open to all over 14 years of age.

FEES.

These schedules and most of the following material relate exclusively to conditions in the so-called evening elementary schools, the only classes where the alien is likely to be found. Some communities support evening commercial, high, industrial, or vocational schools, but these are outside the limits of the present inquiry.

Fees in evening schools do not amount to any significant figure, although a few less important places report that their school is entirely dependent upon this source of income. Several of the States have specific regulations against charging fees in the schools as a condition of receiving State grant. With relatively few exceptions, fees where collected do not apply to foreigners learning English, and in these exceptions the amounts are seldom burdensome. Only 77 schools out of 429 report fees charged, and 54 of these are found in the States of Illinois, Iowa, Massachusetts, Michigan, New York, Ohio, and Pennsylvania.

In Illinois these fees range from 50 cents per month to $2 per month for a six months' term. It is significant to note that in the city charging this higher figure no school was opened in 1915–16 because there was not sufficient enrollment of those willing to pay this fee. Iowa reports fees ranging from $1 per season to $5 per season for those over 21 years of age. Massachusetts cities charge $1 to $2 per season, but only for those not subject to the compulsory attendance law. Michigan school fees range from $1 per season to 50 cents per week for a five months' term. New York charges in six schools from $1 to $2. Ohio reports from $1 per season to 10 cents per lesson for those over 21 years of age, for an 87-lesson term. In Pennsylvania the fees range from 25 cents per season to $1 per month for a five months' term.

DEPOSITS.

In 150 communities deposits are required of evening-school pupils, usually as an earnest of good faith, but sometimes in order to guarantee satisfactory deportment, return of books loaned, or regularity of attendance. The fact that in nearly every case reasonable care on the part of the pupils will secure the return of this fee is sufficient warrant for these assertions. The most frequent attendance requirement ranges from two-thirds to four-fifths of the possible attendances, although in some cases it is left under the general statement of "satisfactory attendance and deportment," and one town goes so far as to demand perfect attendance on condition of returning 50 per cent of the deposit.

SUPERVISION.

Evening-school supervision is far from being upon a satisfactory basis. It should be as much a specialty as the many other phases of school work that are recognized as demanding expert supervision. Most of the work, however, is still under the general direction of the superintendent's office. About one-third (150) of all the cities and towns whose returns are available report a director for evening-school work, although in certain cities this direction is merely an added function laid upon an administrative officer already seriously overburdened.

Existence or nonexistence of the director of evening schools, as found in the returns, is not always a dependable criterion of the work done, for many small communities report such a director and many important places report none. For example, a city of over 250,000 inhabitants, well known for the efficiency of its general supervision, in reporting no director of evening schools, adds that such schools are supervised by the superintendent and his assistant. On the other hand, a little borough of 600 inhabitants in the same State, for which a record happens to be available, reports a director of evening schools whose duties include teaching "reading, writing, and English work." It is not difficult to judge between the efficiency of the actual direction of evening schools in these two communities.

All varieties of duties are specified in the returns, from "merely teaching," "merely providing classes for the schools," "dividing the classes and grading them," to "to cooperate with the government, to advise course of study, and to study the classroom instruction." One of the most suggestive lists of specific duties is thus enumerated by the director of evening schools in Gardner, Mass.:

> The principal acts as director. He speaks before the different clubs and societies. He visits the pastors of the foreign churches. He interviews the overseers at the factories. He acts in an advisory capacity at the foreign clubs, aiding in the purchase of books, etc.

A most comprehensive statement comes from Rochester, N. Y., a city which has made great strides in its Americanization movement:

> This part of our work is in charge of our Director of Immigrant Education, who prepares the outlines, supervises the teaching, and conducts normal classes for the training of teachers.

From the information at hand, it is evident that effective supervision, even as the term is used in connection with day-school work, is practically negligible in evening schools, if the country as a whole be considered. Relatively few cities are attempting it at all, and the number attacking the problem effectively is insignificant. Yet new problems of organization and method are presenting themselves, and these can not be solved as are those of the day school, largely because the age limits of evening-school pupils cover a wider range than those of the ordinary school. Special training or peculiar skill of adaptation is essential in order to cope with the unusual situations in evening-school work.

TEACHERS.

Teachers in evening-school classes are recruited very largely from among the day-school staff. Many superintendents follow this method from choice, and many others from necessity. The former assert that day-school teachers have already proved their efficiency, while the latter accept such teachers reluctantly and only as a last resort, at the same time maintaining that evening-school work interferes with the efficiency of both day and evening schools. It is extremely doubtful whether nine-tenths of the day teachers are able either physically or professionally to carry this double burden, under the prevailing conditions. The conscientious teacher already spends too many evenings in school work, for they provide the only available time for the outside preparation which no good teacher can get along without.

Opinions differ as to the advisability of having the teachers use the language of the pupils, although from the character of the replies received it is evident that most of the judgments are purely ex cathedra, and are not based upon actual experience. Some superintendents require this language acquaintance; some refuse to recognize it as a qualification for appointment; and some are indifferent. Ability to speak the language of the alien pupil is of unquestioned value in organizing the classes, and it undoubtedly tends to establish a comfortable personal relationship between teacher and pupils if the pupils feel that they can find a sympathetic listener and helper in the person of the teacher. As far as subsequent classroom use is concerned, however, its advantage is not so obvious, for the prime purpose of the pupil is to learn English. Besides, in a polyglot group of pupils, such language knowledge on the part of the teacher is practically impossible.

The essential advantages of acquaintance with the language of the pupils in organizing the classes may be secured through interpreters, utilizing, for instance, the services of steamship agents, private bankers, and the like, who will be found in almost every immigrant community. This interpreter service should by all means be provided for in some way.

CERTIFICATES.

So far as may be judged from available returns, only seven cities have an effective special certificate in vogue for teachers of classes of immigrants: Buffalo, New York, and Rochester, N. Y.; Hoboken and Trenton, N. J.; Cincinnati and Middletown, Ohio. The Rochester requirement runs thus:

> Must be graduates of the normal class for teachers of English to foreigners; must be high-school graduates at least; must evince an aptitude for this work; must be familiar with methods and textbooks.

Buffalo, Hoboken, and Trenton require knowledge of the native language of the pupils, but in Buffalo, at least, this language test seems to have fallen into abeyance.

QUALIFICATIONS.

Most cities in California, New Jersey, and New York, as well as 15 cities outside these States, demand the possession of the regular teachers' certificates. Five of these cities are found in Massachusetts, while the others are scattered through Illinois, Kentucky, Maine, Michigan, Nebraska, Ohio, Pennsylvania, Utah, Virginia, and Washington.

APPOINTMENT.

Teachers are appointed in various ways, almost all methods being represented: By the superintendent, by the board on recommendation of the superintendent or supervisor, by a committee of the board, by the principal, by the director of evening schools, by the supervisor of extension work, or by the board of industrial education (Wisconsin).

TRAINING.

Little definite training for teachers of foreigners is yet under way, yet the problems encountered in this type of work are certainly as different from those involved in ordinary elementary and secondary teaching as are those between kindergartening and ordinary teaching. For the year 1915–16 a few cities report special training courses. Manifestly, if such courses are not available, it is futile to attempt to impose such training requirements as a qualification for appointment. Albany, Buffalo, and Rochester, N. Y., and Harris Teachers' College, St. Louis, are offering specific courses of training in this field. Wilmerding, Pa., offers a course of training for its teachers and insists that the teachers of foreigners follow it. Pittsburgh, Pa., has a printed course of study for evening schools, and endeavors by frequent conferences to make sure that it is scrupulously followed. Other cities note special meetings or conferences with evening-school teachers: Rockford and East Chicago, Ill., Franklin, Mass., Hibbing, Minn., Garwood, N. J., Hudson Falls and Yonkers, N. Y., Milwaukee and Superior, Wis. Thirty-five cities report lectures on immigrant education problems, but even these reach only a small proportion of the communities that are conducting evening schools for foreigners.

SALARIES.

In the main, salaries of both teachers and principals in the evening schools are paid on the evening basis, although some teachers are paid by the hour, some by the week, some by the month, and some by the year. The distribution of the various bases upon which teachers' salaries are paid in the 354 places reporting on this point is as follows:

Basis of payment of teachers' salaries.

Towns and cities paying by the—	Number.
Hour (or period)	41
Evening	271
Week	[1] 5
Month	31
Year	[2] 6
Total	354

Principals' salaries are usually paid upon the same basis as the teachers', although in 14 cases the basis is different, seven of these representing the principal's salary upon a monthly basis instead of the hourly or daily basis of the teachers'; five representing a corresponding change to the yearly basis; and two a change from the hourly basis prevailing for the teachers to the evening basis. These few differences would make the distribution basis for the principals' salaries slightly different from that of the teachers' given just before.

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[1] Council Grove, Kans.; Westfield, Mass.; Alpena, Mich.; Conneaut, Ohio; Burlington, Vt.

[2] Berkeley and Oakland, Cal.; Bordentown, Ridgewood, and Tenafly, N. J.; Ogden, Utah.

Yearly salaries for teachers range from $80 in the case of Bordentown and Ridgewood, N. J., to $500 and $700 in Oakland, Cal. As in the case of day-school salaries, California heads the list, although the difference is not quite so striking as these figures would seem to indicate when one notes that the evening-school year in the two New Jersey towns is only 64 nights as against 187 in Oakland.

The 33 monthly salaries range from the Casino Technical Night School, a privately controlled school in East Pittsburgh, with $15 per month for three times per week and a nine months' term, and Roslyn, Wash., with three times per week and a four months' term, to Tampa, Fla., with $80 per month for three times per week and a six months' term, and Spring Valley, Ill., with $85 per month for six times per week and a ten months' term.

Below will be found a statement in tabular form of the salaries per evening of teachers and principals in three groups of cities, arranged according to population. No attempt has been made to apply exact statistical treatment to these data, but the form found herein will probably be more useful to the ordinary reader. The extremely wide variations go far to vitiate the value of the averages, but the information is sufficiently detailed to enable the school authorities of a given community to estimate roughly the extent to which the salaries in their community conform to the practice in other cities of the same general class.

Salaries of teachers and principals according to population groups.[1]

Population.	Group I. Over 100,000.	Group II. 25,000 to 100,000.	Group III. 10,000 to 25,000.
Teachers' salaries:			
Average	$2.20 (36 cities).	$1.93 (81 cities).	$1.85 (82 cities).
Range	$1 to $3.	$1 to $3.50.	$1 to $3.50.
Most frequent salary	$2.00 (10 cities).	$2.00 (25 cities).	$2.00 (26 cities).
Principals' salaries:			
Average	$3.64 (30 cities).	$3.17 (60 cities).	$2.70 (51 cities).
Range	$1.50 to $5.50.	$1.50 to $6.00.	$1.50 to $5.00.
Most frequent salary	$4.00 (7 cities).	$3.00 (17 cities).	$2.00 (16 cities).

From the foregoing table it is evident that on the whole there is a direct relation between the size of the community and the salaries of teachers and principals. There are, however, twice as many cities in Group II paying $3 per evening or more as there are in Group I. There are also more cities in Group III in this category than in Group I. In some respects this table does not show actual maximum amounts. Hoboken, N. J., for example, a city of the second group, pays its teachers $3 or $4 per evening. For tabulating purposes this appears as $3.50. Pittsburgh and St. Louis each has a maximum principal's salary of $7 per evening, but they pay $4 and $3.50, respectively, as a minimum. In most of the cities there seems to be a fair relation between the salaries of teachers and principals. Gardner, Mass., presents the most striking salary difference, paying its teachers from 75 cents to $1.25 per evening (appearing in the table as $1), but its principal $5 per evening.

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[1] Statistics in Table 6 represent in some instances later information.

NUMBER OF SESSIONS.

Evening-school terms vary widely from Traverse City, Mich., with 20 sessions, 1 per week, to Los Angeles and Oakland, Cal., with 187 sessions, 5 per week. With such a wide range and so much variation, averages mean little. Some of the more significant facts will be apparent from the subjoined table:

Number of sessions in evening-school term, 1914–15—Range of sessions.

Population.	Group I. Over 100,000.	Group II. 25,000 to 100,000.	Group III. 10,000 to 25,000.
Cities reporting	43	102	113
Average number of sessions.	83	79	59
Cities reporting	Over 90 sessions, 9 70–90 sessions, 24 Less than 70 sessions, 10	Over 90 sessions, 22 60–90 sessions, 59 Less than 60 sessions, 21	Over 80 sessions, 13 40–80 sessions, 78 Less than 40 sessions, 22

As might be expected, the larger cities as a rule have the longer evening-school sessions, but certain similarities are apparent in the returns for particular States, largely due to the operation of State laws. In California, for example, the session varies in the main between 140 and 187 evenings, for in that State the evening-school term is practically coextensive with that in the day schools. In Connecticut the number is almost uniformly 75 sessions per year, for that is in pursuance of the State law bearing upon the subject. New Jersey, on the other hand, insists upon a 64-session year as one of the conditions for sharing in the grant for evening schools; hence a certain uniformity in that State. Massachusetts, despite its advanced position on the subject of compulsory attendance for illiterates beyond the compulsory school age, seems to have done nothing to provide for a minimum number of sessions. As a result, with few exceptions, the Massachusetts cities are below the average of their population class, as indicated in the table just above, for the number of sessions of their evening schools.

EVENINGS PER WEEK.

The number of sessions per week varies from one to six, with three as the most frequent number. Following will be found the number of cities reporting on this point, classified according to the number of sessions per week.

Classification of cities according to number of evening-school sessions per week.

Cities having evening school—	Cities.
One night per week	5
Two nights per week	54
Three nights per week	175
Four nights per week	102
Five nights per week	38
Six nights per week	[1] 2
Total	376

From this it appears that the distribution of frequency of evening-school sessions per week approximates the curve of normal distribution. It is evident, therefore, that size of city has relatively little effect on this feature.

SESSION NIGHTS.

Monday is by all odds the most popular night for evening-school sessions. Of 376 cities reporting on this point, 335 have evening school on Monday. Most of the possible evening combinations are found in the returns. The most frequent combination is Monday, Wednesday, Friday, found in 86 cities, closely followed by Monday, Tuesday, Wednesday, Thursday, which occurs in 80 cities. Below will be found all the combinations chosen by 18 or more cities, with the number of cities choosing each combination:

Evening combinations, with number of cities adopting each.

	Cities.
Monday, Wednesday, Friday	86
Monday, Tuesday, Wednesday, Thursday	80
Monday, Tuesday, Thursday	44
Monday, Tuesday, Wednesday, Thursday, Friday	38
Tuesday, Thursday	23
Monday, Tuesday, Thursday, Friday	20
Monday, Wednesday, Thursday	18
Scattering	67
Total	376

HOURS OF SESSIONS.

Evening-school sessions are held at various times, almost any combination of hours being obtainable from 6 o'clock in the evening until half past 10. One community, Ely, Minn., which runs its evening schools in shifts in order to meet the needs of the mine workers, has one group from 4 to 6 in the afternoon and the other from 7 to 9 in the evening. From 7.30 to 9.30 is the commonest hour, 146 (out of 428 communities reporting on this point) having evening-school sessions at that period. This is closely followed by the 7 to 9 period, which is found in 122 cities and towns, and the 7.30 to 9 period, in 58 communities.

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[1] Chillicothe, Ohio, and Spring Valley, Ill. In neither case does any individual have six nights of work. In Spring Valley it is either Monday, Wednesday, and Friday, or Tuesday, Thursday, and Saturday. In Chillicothe each pupil has from one to three nights per week according to subjects elected. In this latter city there is a relatively small alien population.

Whatever the time of meeting may be, the two-hour session is very common, 323 out of 428 reporting it. If the 74 cities having a session of an hour and a half are eliminated from the others, the residue scattered all along between one and four hours is practically negligible. Three communities report one-hour sessions, and one, Spring Valley, Ill., reports a four-hour session.

SUMMER SESSIONS.

A few cities report summer sessions for aliens: Los Angeles and Oakland, Cal.; Saginaw (west side), Mich.; Amsterdam, N. Y.; Akron, Ohio (Y. M. C. A.); Cokeburg, Pa. (Ellsworth Collieries Co.).

In Los Angeles, Cal., this was a day session, opening in July and closing in August. Oakland ran its classes in the evening from June 6 to July 28. This gives Oakland practically 52 weeks of evening school, for the summer session bridged the gap between the close of the regular evening-school session, June 2, and the opening of the new school year on July 29.

Amsterdam, N. Y., likewise reports a day session for aliens beginning July 6 and continuing for six weeks. Akron, Ohio, Y. M. C. A., with its summer school for aliens, also rounds out a 52-week year for evening work, with four sessions per week. In Cokeburg, Pa., the evening classes during the summer were classes in sewing for married foreign women.

Lack of funds prevented New York City from conducting its evening classes in English for foreigners in the summer of 1915. These classes had been very successful in 1913–14, the attendance record in that year having been 83.6 per cent, as opposed to 71.7 per cent for the regular winter session.

Summer sessions for foreigners seem especially desirable, for the summer months are the period of greatest immigration. With the short evening-school term (frequently closing in March or even earlier), the first weeks of the foreigner's sojourn in the new land pass by, and a certain tactical advantage is lost. Before fall, the novelty has worn off, the early enthusiasm has been spent, language adjustments have been made, and it is more difficult to bring before the foreigner the necessity of getting into touch with our language and our institutions.

OTHER SESSIONS.

Racine, Wis., reports a continuation school in the afternoons during the regular school year, which was attended by unemployed and night workers. Dunkirk, N. Y., conducted a special day session for aliens, which was held during the regular day-school hours in the high-school building. This class was composed of a number of foreigners over the age of 20 and up to 50, who were not working and who were glad to seize this opportunity of furthering their knowledge of English. The class continued during a dull industrial period (Feb. 1 to Apr. 1) as an offshoot of the regular evening classes.

PUBLICITY METHODS.

Evening-school authorities, taking the country as a whole, do not yet seem alive to the necessity of bringing their schools to the attention of the people whom they ought to reach. Too frequently a hit-or-miss plan is followed, if indeed publicity is not neglected altogether. "We only advertise through the public press," which fairly typifies the attitude characteristic of one of the more important immigration States, is unfortunately more than many a community attempts to do. Evening classes for foreigners are chiefly intended to teach English, yet too frequently the only notices of such classes are published exclusively in English. What is the chance that the non-English-speaking foreigner will profit by such a notice, whether on bulletin board or in the public press? Where no foreign-language paper is issued in the town, it is possible to have notices in the foreign tongues inserted in the American newspaper (Ithaca, N. Y.). Too little use is made of the foreign-language press.

Many cities and towns report that they are using posters in the foreign language to advertise their schools. From internal evidence, it is apparent that most of these places refer to the use of the "America First," poster which was sent out for the first time in the fall of 1915 by the Bureau of Education. A few communities, however, note the use of such foreign-language posters before this present year (notably Fall River, Fitchburg, and New Bedford, Mass., Jersey City, N. J.). Posters are placed in "stores, meat markets, pool rooms, saloons, and factories" (Madison, Wis.), on electric-light poles (Milwaukee, Wis.), and in street cars (Jackson, Mich.).

Cooperating committees of foreigners are called upon in a few instances to encourage evening-school attendance, but this means of publicity seems on the whole to have been neglected. Neighborhood centers in public school buildings are surprisingly few. One superintendent, who fortunately is not typical, expresses himself very forcibly on this point: "We do not encourage foreigners' societies to meet in school buildings. Our school buildings are for Americans only."

Children in the public schools are frequently used as messengers to carry invitations to parents and other adult members of their households, Chicago having distributed 400,000 handbills by this means in 1914–15. Church cooperation is utilized to some extent. In Trenton, N. J., for instance:

> Announcements are made in all the churches and Sunday schools, being especially emphasized in Catholic churches by request of the bishop. Announcements are also made in day public and parochial schools. Circular letters are sent to employers, labor organizations, foreigners' clubs and societies, and civic clubs.

In Dunkirk, N. Y., "notices are put in all the pay rolls in the city." Buffalo, N. Y., employs a home visitor, while certain Pennsylvania towns (Cokeburg, East Pittsburgh, and Ford City) have a personal house-to-house canvass made by visitors who speak the language of the foreigners.

So far as is known seven cities and towns in the country (Boston and Waltham, Mass., Providence and Warren, R. I., and Manitowoc, Superior, and Two Rivers, Wis.) utilize the moving-picture theaters to show slides announcing their evening schools.

In Boston—

> posters are placed on the dashboards of electric cars. Motion-picture establishments announce the opening of evening schools, local and foreign newspapers are used in gaining publicity, individual principals circulate notices and handbills printed in the various languages, and an attempt is made to secure the cooperation of all existing agencies that are interested in the training of immigrants for citizenship.

The extensive and successful publicity campaigns carried on in Detroit, Mich., and Syracuse, N. Y., are significant of what can be done.

Detroit is a typical immigration city. Attracted by the lure of heavy demands for labor and good wages, foreign workmen had flocked there by the scores of thousands. Business men were quick to recognize the need for Americanizing these people, and they wisely turned to the evening schools as the means for accomplishing this purpose. Backed by the chamber of commerce, a city-wide campaign was opened, with cooperation of all available forces as the watchword. Employers of labor, churches, priests and pastors, municipal departments, social and philanthropic organizations, employment agencies, clubs, neighboring educational authorities, interested individuals, the foreign-language and the English press, all pulled together. As a first result, an increase of 153 per cent in the registration of evening schools was reported. It is yet too early to express an opinion as to the ultimate effects of this campaign. Such initial success, however, is a harbinger of greater effectiveness for the future.[1]

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[1] "Americanizing a City," a pamphlet prepared for the Bureau of Education for general distribution, contains an account of the Detroit campaign.

COOPERATION WITH NATURALIZATION AUTHORITIES.

Much work remains to be done in urging the schools to greater efforts in reaching applicants for naturalization and in gathering them into the evening school. A few places send the regular truant officer, armed with the Government blanks, to the homes of applicants for naturalization. These applicants are thus urged through personal solicitation to attend the night school. Ninety days, however, is far too short a time to accomplish much with either English or citizenship instruction. Some means must be devised of catching these prospective citizens earlier. School authorities are certainly derelict in looking up even these applicants for citizenship. Only 213 cities out of 438 reporting on this point make any definite effort to get into touch with the applicants for naturalization, and these returns cover practically all the principal cities of the country which have evening schools for foreigners. Some (132) state definitely that they do nothing along this line, while the others (93) fail to report. It is probably safe to assume that they, too, are doing nothing.

Despite the efforts of the Federal Government to bring about a closer cooperation between the naturalization courts and the schools, results are still far from satisfactory. Fewer than 20 per cent of these 438 cities report any recognition accorded English and civics classes by naturalization clerks. Ignorance on the part of school authorities with reference to the practice of naturalization clerks in recognizing school work is somewhat striking. Some confess frankly that they have no knowledge on the subject, while others disregard the question, the inference naturally being that they are not in touch with this court procedure.

Los Angeles, on the other hand, has developed a unique cooperation with the naturalization courts. Every applicant who attends a citizenship class and meets a certain scholastic standard is given a certificate which is recognized by the naturalization court. Periodically a formal welcome is given to the new citizens under the auspices of the courts, with the cooperation of the board of education and civic and patriotic organizations. With the judge of the court as presiding officer, each naturalization applicant is called up individually and is publicly awarded his certificate of citizenship.

There is need, however, for wider cooperation between the courts of naturalization and the schools, for the schools can be of invaluable assistance to the court officials if an effective plan of cooperation can only be evolved.

The citizenship reception in Philadelphia, May, 1915, at which the newly naturalized citizens were addressed by President Wilson, is still fresh in people's minds. Other cities have likewise done their part in holding similar gatherings to welcome the new citizens, and in giving them some realization of the solemnity of the step they are taking.

STATISTICAL TABLES.

TABLE 1.—*Foreign-born white population, by States, with per cent of total white population, census of 1910.*

States.	Number.	Per cent.	States.	Number.	Per cent.
United States	13,345,545	16.3	South Dakota	100,628	17.8
			New Hampshire	96,558	22.5
New York	2,729,272	30.4	Montana	91,644	25.4
Pennsylvania	1,436,719	19.3	Utah	63,393	17.3
Illinois	1,202,560	21.8	West Virginia	57,072	4.9
Massachusetts	1,051,050	31.6	Louisiana	51,782	5.5
New Jersey	658,188	26.9	Vermont	49,861	14.1
Ohio	597,245	12.8	Arizona	46,824	27.3
Michigan	595,524	21.4	Idaho	40,427	12.7
Minnesota	513,010	26.4	Oklahoma	40,084	2.8
California	517,250	22.9	Kentucky	40,053	2.0
Wisconsin	512,569	22.1	Florida	33,842	7.6
Connecticut	328,759	29.9	Wyoming	27,118	19.3
Iowa	273,484	12.4	Virginia	26,628	1.9
Washington	241,197	21.7	District of Columbia	24,351	10.3
Texas	239,984	7.5	New Mexico	22,654	7.4
Missouri	228,896	7.3	Alabama	18,956	1.5
Rhode Island	178,025	33.4	Tennessee	18,459	1.1
Nebraska	175,865	14.9	Nevada	17,999	24.2
Indiana	159,322	6.0	Delaware	17,420	10.2
North Dakota	156,158	27.4	Arkansas	16,909	1.5
Kansas	155,190	8.3	Georgia	15,072	1.1
Colorado	126,851	16.2	Mississippi	9,389	1.2
Maine	110,133	14.9	South Carolina	6,054	.9
Maryland	101,174	9.8	North Carolina	5,942	.4
Oregon	103,001	15.7			

TABLE 2.—*Illiteracy among foreign-born whites, with per cent of total foreign-born white population, census of 1910.*

[Figures for 10 years of age and over.]

States.	Number.	Per cent.	States.	Number.	Per cent.
United States	1,650,361	12.7	Louisiana	12,085	24.0
			Maryland	12,047	11.9
New York	362,065	13.7	Washington	11,233	4.8
Pennsylvania	279,668	20.1	North Dakota	9,474	6.3
Massachusetts	129,412	12.7	Montana	8,445	9.4
Illinois	117,571	10.1	New Mexico	6,580	31.0
New Jersey	93,551	14.7	Vermont	6,239	13.1
Texas	67,295	30.0	Oregon	6,120	6.1
Ohio	66,887	11.5	South Dakota	4,896	5.0
Michigan	54,113	9.3	Oklahoma	3,828	9.8
California	50,292	10.0	Utah	3,636	5.9
Connecticut	49,202	15.4	Florida	3,390	10.5
Wisconsin	43,662	8.7	Delaware	3,359	19.8
Minnesota	40,627	7.6	Kentucky	3,300	8.3
Rhode Island	29,781	17.3	Idaho	2,742	6.9
Virginia	25,639	9.2	Wyoming	2,548	9.7
Missouri	22,631	10.1	Alabama	2,063	11.3
Indiana	18,300	11.7	District of Columbia	1,944	8.2
Iowa	16,894	6.3	Tennessee	1,488	8.3
Maine	14,394	13.7	Arkansas	1,466	8.9
Colorado	13,897	11.3	Mississippi	1,364	15.1
Kansas	13,787	10.5	Nevada	1,344	7.6
Arizona	13,758	31.5	Georgia	875	6.0
New Hampshire	13,485	14.5	North Carolina	477	8.3
West Virginia	13,075	23.9	South Carolina	399	6.8
Nebraska	12,264	7.1			

TABLE 3.—*Inability to speak English among foreign-born whites, with per cent of total foreign-born white population, census of 1910.*

[Figures for 10 years of age and over.]

States.	Number.	Per cent.	States.	Number.	Per cent.
United States	2,953,011	22.8	Maine	19,589	18.6
			South Dakota	18,486	18.8
New York	597,012	22.7	Maryland	17,544	17.4
Pennsylvania	466,825	33.6	Florida	14,049	43.7
Illinois	266,557	22.8	Montana	13,718	15.3
Massachusetts	171,014	16.8	Oregon	13,531	13.4
Ohio	163,722	28.3	New Mexico	11,776	55.5
New Jersey	153,861	24.2	Louisiana	11,547	22.9
Texas	125,765	56.0	Vermont	8,342	17.5
Wisconsin	120,665	24.0	Utah	8,129	13.1
Michigan	102,286	17.6	Oklahoma	7,975	20.4
Minnesota	89,850	16.8	Wyoming	5,970	22.6
California	74,706	14.8	Idaho	5,805	14.7
Connecticut	64,201	20.1	Delaware	4,824	28.5
Indiana	40,731	26.2	Virginia	3,963	15.5
Missouri	37,747	16.9	Kentucky	3,816	9.6
Iowa	37,169	13.8	Nevada	3,557	20.0
Rhode Island	36,961	21.5	Alabama	3,028	16.6
North Dakota	33,491	22.3	Arkansas	2,741	16.7
Nebraska	29,519	17.1	Tennessee	1,648	9.2
Kansas	28,358	21.5	Mississippi	1,491	16.5
West Virginia	27,461	50.3	District of Columbia	1,349	5.7
New Hampshire	26,783	28.8	Georgia	953	6.5
Washington	25,568	10.9	North Carolina	779	13.6
Arizona	25,072	57.3	South Carolina	447	7.6
Colorado	22,610	18.4			

TABLE 4.—*School attendance among foreign-born whites, by age groups, census 1910.*

States.	Total number.	10 years of age and over.	15 years of age and over.	21 years of age and over.
United States	651,506	446,745	138,253	35,614
New York	187,034	131,541	43,492	9,603
Pennsylvania	69,257	45,640	10,804	2,894
Massachusetts	57,499	40,404	14,117	2,976
Illinois	50,451	32,402	9,153	3,463
New Jersey	35,001	23,016	6,036	1,766
Ohio	26,442	16,987	4,342	1,184
Michigan	25 281	17,374	5,328	1,357
California	19,203	13,406	4,716	1,146
Connecticut	17,563	11,536	3,117	690
Minnesota	17,469	12,574	4,948	1,640
Wisconsin	15,889	10,397	2,934	1,039
Rhode Island	10,285	7,183	1,746	479
Texas	10,176	7,714	2,200	413
Washington	9,672	6,883	2,348	564
North Dakota	9,494	7,326	2,563	535
Missouri	7,834	5,123	1,542	567
Maine	7,165	4,871	1,409	240
Iowa	6,755	4,573	1,735	671
Colorado	5,927	4,090	1,261	305
Nebraska	5,528	3,780	1,419	509
New Hampshire	5,602	3,827	926	150
Indiana	5,210	3,865	1,172	537
Maryland	5,015	3,323	1,021	439
Kansas	4,538	3,168	1,066	298
South Dakota	3,644	2,766	1,105	300
Oregon	3,416	2,407	920	242
Vermont	3,380	2,248	664	70
Arizona	2,783	1,886	423	37
Montana	2,716	1,906	697	161
Utah	2,520	1,796	629	182
West Virginia	2,259	1,448	360	80
Florida	1,838	1,202	346	91
Louisiana	1,718	1,201	376	84
Oklahoma	1,554	1,152	424	101
Virginia	1,334	938	314	73
District of Columbia	1,195	886	397	161
New Mexico	1,166	772	243	26
Idaho	1,128	819	323	81
Alabama	897	622	187	44

TABLE 4.—*School attendance among foreign-born whites, by age groups, census 1910*—Continued.

States.	Total number.	10 years of age and over.	15 years of age and over.	21 years of age and over.
Kentucky	896	631	274	121
Tennessee	839	622	236	51
Wyoming	845	538	166	47
Georgia	721	536	206	55
Delaware	627	417	88	28
Arkansas	539	392	152	43
Mississippi	371	265	98	26
North Carolina	302	232	88	18
Nevada	283	197	88	24
South Carolina	222	163	54	13

TABLE 5.—*Foreign-born whites: Number unable to speak English, illiterate, and attending school, by age groups for the United States as a whole, census 1910.*

Age limits.	Unable to speak English.	Illiterate.	Attending school.
10 years and over	2,953,011	1,650,361	446,745
15 years and over	2,896,606	1,657,677	138,253
21 years and over	2,565,612	1,546,535	85,614

The large majority of those unable to speak English and the illiterate are found in the "over 21 years of age" group. The number in the same group attending school is almost insignificant.

TABLE 6.—*Statistics relating to evening schools, 1914–15.*

[NOTE.—Y indicates Yes; N indicates No; ...... indicate No data.]

Cities and towns.	Census of 1910.		Evening schools.			Sessions.			Fees.[1]	Deposits.	Salaries (per evening unless otherwise indicated).		Enrollment of foreign pupils.
	Population.	Foreign-born whites.	Public.	Public, with classes for foreigners.	Private, with classes for foreigners.	Number of sessions.	Evenings of week.	Hours.			Teachers.	Principals.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ALABAMA.													
Birmingham	132,685	3,160	Y	Y	......	72	M, W, F	7.30– 9.30	N	Y	[2] $1.00	[2] $1.25	90
Mobile	51,521	1,297	N	N	Y	60	M, W, F	7.30– 9.30	Y	......	[3] 20.00	......	9
Montgomery	38,136	420	N	N	Y	80–90	M, W, F	7.30–10.00 8.00–10.30	N	N	0	......	18
ARIZONA.													
Globe	7,083	1,949	Y	......	......	......	......	......	......	......	......	......	......
ARKANSAS.													
Fort Smith	23,075	941	Y	......	......	......	......	......	......	......	......	......	......
CALIFORNIA.													
Alameda	23,383	5,555	Y	Y	......	150	M, T, W, Th	7.00– 9.00	N	N	[4] 40.00–50.00	[5] 600.00	12
Berkeley	40,434	7,653	Y	Y	......	159	M, T, W, Th	7.30– 9.30	N	......	[5] 500.00	[5] 500.00–600.00	100
Fresno	24,892	5,445	Y	Y	......	142	M, T, W, Th	7.00– 9.00	N	......	2.00	2.50	200
Los Angeles	319,198	60,584	Y	Y	......	187	M, T, W, Th, F	7.00– 9.00	N	N	2.00–3.00	[4] 60.00–100.00	400
Oakland	150,174	36,822	Y	Y	......	187	M, T, W, Th, F	7.15– 9.15	N	......	[5] 500.00	[5] 700.00	751
Pomona	10,207	882	Y	Y	......	42	M, Th	7.00– 9.15	N	N	3.00	......	82
Redlands	10,449	1,346	Y	......	......	......	......	......	......	......	......	......	......
Sacramento	44,696	8,885	Y	Y	......	178	M, T, W, Th, F	7.00– 9.00	N	......	......	......	50
San Francisco	416,912	130,874	Y	Y	......	192	M, T, W, Th. F	7.15– 9.15	N	......	[5] 660.00	[5] 1,000.00	600
San Jose	28,946	5,817	Y	Y	......	135	M, T, W, Th, F	7.00– 9.00	N	......	[4] 50.00	[4] 75.00	90
San Leandro	3,471	1,108	Y	Y	......	80	M, T, W, Th, F	7.00– 9.00	N	N	[4] 50.00	[4] 60.00	168
San Rafael	5,934	1,747	Y	Y	......	124	M, T, Th	7.00– 9.00	N	......	[4] 30.00	......	43
Santa Ana	8,429	884	Y	Y	......	72	......	7.00– 9.00	N	......	0	......	60
Santa Monica	7,847	1,248	Y	N	......	62	M, W	7.15– 9.15	N	N	2.50	3.00	......

COLORADO.													
Denver	213,381	38,941	Y	Y	....	94	M, T, W, Th	7.30- 9.15	N	[6] Y	2.50	[4] 75.00	200
Lamar	2,977	203	Y	Y	....	....	M, W, Th	7.15- 9.30	Y	N	....	....	....
Pueblo	44,395	8,331	Y	Y	....	160	M, T, W, Th, F	7.00- 8.30	N	....	[4] 60.00	....	150
CONNECTICUT.													
Ansonia	15,152	5,711	Y	Y	....	75	M, T, Th	7.30-9.30	[6] Y	[6] Y	2.00	....	150
Avon	1,337	....	Y	Y	....	32	M, W	7.00-9.00	N	....	2.00	....	....
Bridgeport	102,054	36,180	Y	Y	....	75	M, T, W, Th, F	7.00-9.00	N	N	[2] .75	[3] 1.50	1,283
Bristol	13,502	3,982	Y	Y	....	75	M, T, Th, F	7.15-9.15	N	....	2.00	2.00	265
Danbury	23,502	5,529	Y	Y	....	75	M, T, W, Th	7.15-9.15	N	N	2.00	4.00	191
Enfield	9,719	3,787	Y	....	....	....	....	....	....	....	....	....	....
Greenwich	16,463	5,080	Y	....	....	....	....	....	....	....	....	....	....
Hartford	98,915	31,243	Y	Y	....	75	M, T, W, Th	7.30-9.30	N	....	2.50-3.00	....	3,000
Huntington	6,545	1,758	Y	Y	....	75	M, T, Th, F	7.30-9.30	N	N	2.00 up.	....	195
Meriden	32,066	9,390	Y	Y	....	75	M, T, W, Th	7.30-9.00	....	Y	1.50-2.00	2.75	302
Middletown	11,851	3,800	Y	Y	....	75	M, T, W, Th	7.30-9.10	N	....	1.00	....	200
Naugatuck	12,722	4,283	Y	Y	....	75	M, T, Th, F	7.30-9.15	N	N	2.00	....	119
New Britain	43,916	18,015	Y	Y	....	75	M, W, F	7.30-9.30	N	....	1.25	3.00	1,423
New Haven	133,605	42,784	Y	....	....	....	....	....	....	....	....	....	....
New London	19,659	4,561	Y	Y	....	75	M, T, W, Th, F	7.00-9.00	N	N	....	....	265
New Milford	5,010	852	Y	Y	....	40	Th	7.00-9.30	N	N	2.50	....	35
Norwalk	24,211	5,686	Y	Y	....	75	M, T, W, Th	7.30-9.30	N	Y	1.75-2.50	2.50	85
Norwich	28,219	8,405	Y	Y	....	75	M, T, W, Th, F	7.30-9.00	N	N	1.25-2.00	2.00	259
Plainville	2,882	528	Y	Y	....	24	M, W	7.00-9.00	N	....	1.25	....	51
Rockville	7,977	2,764	Y	Y	....	75	M, W, F	7.30-9.00	N	Y	1.50	....	80
Southington	6,516	1,724	Y	Y	....	75	M, W, F	7.30-9.00	....	Y	1.50	....	30
South Manchester [7]	....	....	Y	Y	....	75	M, T, Th, F	7.30-9.30	N	Y	2.00	....	179
Stamford	28,836	8,872	Y	Y	....	80	M, T, W, Th, F	7.30-9.30	N	....	1.00-2.00	5.00	951
Torrington	16,840	6,064	Y	Y	....	75	M, T, Th, F	7.00-9.00	N	....	1.50	....	68
Wallingford	11,155	3,302	Y	Y	....	75	M, T, W, Th	7.00-9.00	N	Y	2.00	3.00	78
Waterbury	73,141	25,498	Y	Y	....	83	M, T, Th, F	7.15-9.15	N	N	2.00-2.75	3.00	341
Winsted [8]	7,754	1,552	N	N	Y	30	W	7.30-9.30	N	N	0	....	....
DELAWARE.													
Wilmington	87,411	13,678	Y	[9] Y	....	60	M, W, F	7.00-9.00	N	N	1.25	1.50	178
DISTRICT OF COLUMBIA.													
Washington	331,069	24,351	Y	Y	....	68	M, W, F	7.30-9.30	N	....	2.00	....	536
FLORIDA.													
Jacksonville	57,699	2,488	Y	....	....	....	....	....	....	....	....	....	....
Tampa	37,782	9,896	Y	Y	....	72	M, T, W	7.00-9.00	N	....	[4] 60.00-80.00	[4] 150.00	432

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[1] No account has been taken of the rather prevalent custom of charging fees to nonresidents.
[2] Per hour or period.
[3] Per week.
[4] Per month.
[5] Per year.
[6] For certain pupils.
[7] District in the town of Manchester.
[8] Borough in the town of Winchester.
[9] Under 21 years of age.

TABLE 6.—*Statistics relating to evening schools, 1914–15.*

[NOTE.—Y indicates Yes; N indicates No; ...... indicate No data.]

Cities and towns.	Census of 1910.		Evening schools.			Sessions.			Fees.[1]	Deposits.	Salaries (per evening unless otherwise indicated).		Enrollment of foreign pupils.
	Population.	Foreign-born whites.	Public.	Public, with classes for foreigners.	Private, with classes for foreigners.	Number of sessions.	Evenings of week.	Hours.			Teachers.	Principals.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ALABAMA.													
Birmingham	132,685	3,160	Y	Y	......	72	M, W, F	7.30– 9.30	N	Y	[2] $1.00	[2] $1.25	90
Mobile	51,521	1,297	N	N	Y	60	M, W, F	7.30– 9.30	Y	......	[3] 20.00	......	9
Montgomery	38,136	420	N	N	Y	80–90	M, W, F	7.30–10.00 8.00–10.30	N	N	0	......	18
ARIZONA.													
Globe	7,083	1,949	Y	......	......	......	......	......	......	......	......	......	......
ARKANSAS.													
Fort Smith	23,975	941	Y	......	......	......	......	......	......	......	......	......	......
CALIFORNIA.													
Alameda	23,383	5,555	Y	Y	......	150	M, T, W, Th	7.00– 9.00	N	N	[4] 40.00–50.00	[5] 600.00	12
Berkeley	40,434	7,653	Y	Y	......	159	M, T, W, Th	7.30– 9.30	N	......	[5] 500.00	[5] 500.00–600.00	100
Fresno	24,892	5,445	Y	Y	......	142	M, T, W, Th	7.00– 9.00	N	......	2.00	2.50	200
Los Angeles	319,198	60,584	Y	Y	......	187	M, T, W, Th, F	7.00– 9.00	N	N	2.00–3.00	[4] 60.00–100.00	400
Oakland	150,174	36,822	Y	Y	......	187	M, T, W, Th, F	7.15– 9.15	N	......	[5] 500.00	[5] 700.00	751
Pomona	10,207	882	Y	Y	......	42	M, Th	7.00– 9.15	N	N	3.00	......	32
Redlands	10,449	1,346	Y	......	......	......	......	......	......	......	......	......	......
Sacramento	44,696	8,885	Y	Y	......	178	M, T, W, Th, F	7.00– 9.00	N	......	......	......	51
San Francisco	416,912	130,874	Y	Y	......	192	M, T, W, Th. F	7.15– 9.15	N	......	[5] 660.00	[5] 1,000.00	600
San Jose	28,946	5,817	Y	Y	......	185	M, T, W, Th, F	7.00– 9.00	N	......	[4] 50.00	[4] 75.00	90
San Leandro	3,471	1,108	Y	Y	......	80	M, T, W, Th, F	7.00– 9.00	N	N	[4] 50.00	[4] 60.00	168
San Rafael	5,934	1,747	Y	Y	......	124	M, T, Th	7.00– 9.00	N	......	[4] 30.00	......	43
Santa Ana	8,429	884	Y	Y	......	72	......	7.00– 9.00	N	......	0	......	60
Santa Monica	7,847	1,248	Y	N	......	62	M, W	7.15– 9.15	N	N	2.50	3.00	......

COLORADO.													
Denver	213,381	38,941	Y	Y	....	94	M, T, W, Th	7.30–9.15	N	[6] Y	2.50	[4] 75.00	200
Lamar	2,977	203	Y	Y	....	....	M, W, Th	7.15–9.30	Y	N	....	....	....
Pueblo	44,395	8,331	Y	Y	....	160	M, T, W, Th, F	7.00–8.30	N	....	[4] 60.00	....	150
CONNECTICUT.													
Ansonia	15,152	5,711	Y	Y	....	75	M, T, Th	7.30–9.30	[6] Y	[6] Y	2.00	....	150
Avon	1,337	....	Y	Y	....	32	M, W	7.00–9.00	N	....	2.00	....	....
Bridgeport	102,054	36,180	Y	Y	....	75	M, T, W, Th, F	7.00–9.00	N	N	[2] .75	[3] 1.50	1,283
Bristol	13,502	3,982	Y	Y	....	75	M, T, Th, F	7.15–9.15	N	....	2.00	2.00	265
Danbury	23,502	5,529	Y	Y	....	75	M, T, W, Th	7.15–9.15	N	N	2.00	4.00	191
Enfield	9,719	3,787	Y										
Greenwich	16,463	5,080	Y										
Hartford	98,915	31,243	Y	Y	....	75	M, T, W, Th	7.30–9.30	N	....	2.50–3.00	....	3,000
Huntington	6,545	1,758	Y	Y	....	75	M, T, Th, F	7.30–9.30	N	N	2.00 up.	....	195
Meriden	32,066	9,390	Y	Y	....	75	M, T, W, Th	7.30–9.00	....	Y	1.50–2.00	2.75	302
Middletown	11,851	3,800	Y	Y	....	75	M, T, W, Th	7.30–9.10	N	....	1.00	....	200
Naugatuck	12,722	4,283	Y	Y	....	75	M, T, Th, F	7.30–9.15	N	N	2.00	....	119
New Britain	43,916	18,015	Y	Y	....	75	M, W, F	7.30–9.30	N	....	1.25	3.00	1,423
New Haven	133,605	42,784	Y										
New London	19,650	4,561	Y	Y	....	75	M, T, W, Th, F	7.00–9.00	N	N	....	....	265
New Milford	5,010	852	Y	Y	....	40	Th	7.00–9.30	N	N	2.50	....	35
Norwalk	24,211	5,686	Y	Y	....	75	M, T, W, Th	7.30–9.30	N	Y	1.75–2.50	2.50	85
Norwich	28,219	8,405	Y	Y	....	75	M, T, W, Th, F	7.30–9.00	N	N	1.25–2.00	2.00	259
Plainville	2,882	528	Y	Y	....	24	M, W	7.00–9.00	N	....	1.25	....	51
Rockville	7,977	2,764	Y	Y	....	75	M, W, F	7.30–9.00	N	Y	1.50	....	80
Southington	6,516	1,724	Y	Y	....	75	M, W, F	7.30–9.00	....	Y	1.50	....	30
South Manchester [7]	....	....	Y	Y	....	75	M, T, Th, F	7.30–9.30	N	Y	2.00	....	179
Stamford	28,836	8,872	Y	Y	....	80	M, T, W, Th, F	7.30–9.30	N	....	1.00–2.00	5.00	951
Torrington	16,840	6,064	Y	Y	....	75	M, T, Th, F	7.00–9.00	N	....	1.50	....	68
Wallingford	11,155	3,302	Y	Y	....	75	M, T, W, Th	7.00–9.00	N	Y	2.00	3.00	78
Waterbury	73,141	25,498	Y	Y	....	83	M, T, Th, F	7.15–9.15	N	N	2.00–2.75	3.00	341
Winsted [8]	7,754	1,552	N	N	Y	80	W	7.30–9.30	N	N	0	....	....
DELAWARE.													
Wilmington	87,411	13,678	Y	[9] Y	....	60	M, W, F	7.00–9.00	N	N	1.25	1.50	178
DISTRICT OF COLUMBIA.													
Washington	331,069	24,351	Y	Y	....	68	M, W, F	7.30–9.30	N	....	2.00	....	536
FLORIDA.													
Jacksonville	57,699	2,488	Y										
Tampa	37,782	9,896	Y	Y	....	72	M, T, W	7.00–9.00	N	....	[4] 60.00–80.00	[4] 150.00	432

[1] No account has been taken of the rather prevalent custom of charging fees to nonresidents.
[2] Per hour or period.
[3] Per week.
[4] Per month.
[5] Per year.
[6] For certain pupils.
[7] District in the town of Manchester.
[8] Borough in the town of Winchester.
[9] Under 21 years of age.

TABLE 6.—*Statistics relating to evening schools, 1914–15*—Continued.

[NOTE.—Y indicates Yes; N indicates No; ...... indicate No data.]

Cities and towns.	Census of 1910.		Evening schools.			Sessions.			Fees.	Deposits.	Salaries (per evening unless otherwise indicated).		Enrollment of foreign pupils.
	Population.	Foreign-born whites.	Public.	Public, with classes for foreigners.	Private, with classes for foreigners.	Number of sessions.	Evenings of week.	Hours.			Teachers.	Principals.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
GEORGIA.													
Athens	14,913	183	Y	N	......	177	M, T, W, Th, F	7.00-9.00	N	N	$1.00	$1.50	6
Atlanta	154,839	4,410	Y	......	......	......	......	......	......	......	......	......	......
Dublin	5,759	38	Y	......	......	......	......	......	......	......	......	......	......
IDAHO.													
Boise	17,358	2,283	Y	......	......	......	......	......	......	......	......	......	......
ILLINOIS.													
Aurora	29,807	6,702	Y	Y	......	40	M, Th	7.30-9.00	N	Y	1.50	......	85
Blue Island	8,043	1,903	Y	Y	......	134	M, T, W, Th	7.00-9.00	N	......	[1] 20.00	[1] 30.00	101
Canton	10,453	1,122	N	N	Y	124	M, W, F	7.30-9.00	N	Y	1.00	......	44
Chicago	2,185,283	781,217	Y	Y	Y	77	M, T, W, Th	7.00-9.00 7.15-9.15 7.30-9.30	N	[2] Y	2.00-2.50	5.00	17,645
Cicero	14,557	6,072	Y	Y	......	88	......	7.30-9.30	N	N	2.50	......	363
De Kalb	8,102	2,584	Y	Y	......	......	......	......	......	......	......	......	......
East St. Louis	58,547	9,400	Y	Y	......	143	M, T, W, Th, F	7.00-9.00	[2] Y	N	[1] 35.00	......	166
Elgin	25,976	5,661	N	N	Y	25	Th	7.30-9.30	N	......	......	......	13
Evanston	24,978	5,700	Y	......	......	......	......	......	......	......	......	......	......
Geneva	2,451	......	Y	Y	......	24	T, Th	7.00-9.00	Y	......	1.00	......	30
Granite City	9,903	2,185	Y	Y	......	90	M, T, W, Th	7.30-9.30	Y	......	[3] 1.00	[1] 20.00	33
Harvey	7,227	2,203	Y	N	......	36	M, W, F	7.00-9.00	Y	......	......	......	......
Joliet	34,670	10,441	Y	Y	......	98	M, T, W, Th	7.00-9.00	N	N	2.00	......	206
Kewanee	9,307	2,186	Y	......	......	......	......	......	......	......	......	......	......
La Salle	11,537	3,442	Y	Y	......	59	M, W, F	7.15-9.30	N	......	[1] 30.00	......	42
Moline	24,199	7,211	Y	Y	......	50	M, T, Th	7.30-9.30	Y	......	1.50	3.00	224
Murphysboro	7,485	402	Y	......	......	......	......	......	......	......	......	......	......
Oak Park	19,444	3,325	Y	......	......	36	M, T, W	7.00-9.00	N	......	2.50	3.00	......
Peoria	66,950	8,810	Y	Y	......	100	M, T, W, Th, F	7.00-9.00	N	Y	[1] 40.00	[1] 50.00	100
Rockford	45,401	13,828	Y	Y	......	52	M, T, Th	7.00-9.00	Y	Y	2.00	2.50	461

Rock Island	24,335	4,922	Y	Y	......	40	T, Th	7.30-9.00	Y	......	1.50	......	51
St. Charles	4,046	1,572	Y	Y	......	48	M, W, F	7.00-9.00	Y	N	[3] .75	......	74
Springfield	51,678	6,900	Y	......	......	......	......	......	......	......	......	......	......
Spring Valley	7,035	3,329	Y	Y	......	......	M, T, W, Th, F, S	6.15-10.15	Y	N	[1] 70.00-85.00	......	53
Staunton	5,048	1,950	Y	Y	......	......	......	......	......	......	......	......	75
Sycamore	3,926	686	N	N	Y	39	M, T, F	7.00-9.00	N	......	0	......	30
Virden	4,000	826	Y	......	......	35	M	7.00-9.00	N	......	0	......	......
INDIANA.													
Anderson	22,476	977	Y	Y	......	24	......	7.30-9.30	N	N	......	......	......
Brazil	9,340	725	Y	......	......	......	M, T, W, Th, F	6-8 or 10	N	......	......	......	......
Clinton	6,229	1,805	N	N	Y	......	M, F	6.30-8.00	N	......	......	......	40
Crawfordsville	9,371	181	Y	N	......	40	M, T, W, Th	7.00-9.00	[2] Y	......	......	......	......
East Chicago	19,098	10,295	Y	Y	......	84	M, T or W, Th	7.00-9.00	[2] Y	N	2.00	2.00	642
Evansville	69,647	4,462	Y	N	......	72	M, T, Th	7.30-9.30	N	N	......	......	......
Fort Wayne	63,933	7,204	Y	Y	......	96	T, Th or F	7.30-9.00	N	......	2.00	......	65
Gary	16,802	8,242	Y	......	......	......	......	......	......	......	......	......	......
Greencastle	3,790	90	Y	......	......	......	......	......	......	......	......	......	......
Hammond	20,925	5,553	Y	Y	......	......	......	......	......	......	......	......	......
Indianapolis	233,650	19,767	Y	Y	......	80	M, T, W, Th	7.15-9.00	N	Y	2.25	4.00	200
La Fayette	20,081	2,019	Y	N	......	168	M, T, W, Th, F	......	......	......	......	......	......
Laporte	10,525	1,954	Y	Y	......	48	M, F	7.00-9.00	N	N	3.00-4.00	......	131
Logansport	19,050	1,405	Y	Y	......	66	M, T, Th	7.30-9.00	N	......	[3] 2.00	......	32
Muncie	24,005	840	Y	N	......	48	T or W, Th or F	7.30-9.30	N	N	1.50-2.10	......	......
New Albany	20,629	858	Y	N	......	......	......	......	......	......	......	......	......
Richmond	22,324	1,173	Y	......	......	......	......	......	......	......	......	......	......
South Bend	53,684	13,420	Y	Y	......	80	M, T, W, Th	7.30-9.00	N	N	1.50-2.00	2.00	175
Whiting	6,587	2,888	Y	N	......	......	......	......	......	......	......	......	......
IOWA.													
Cedar Falls	5,012	753	N	N	Y	30	......	7.30-9.30	N	......	......	......	......
Cedar Rapids	32,811	5,321	Y	Y	......	80	M, W, F	7.30-9.30	N	......	1.50	2.00	116
Charles City	5,892	821	Y	N	......	......	......	......	......	......	......	......	......
Davenport	43,028	8,101	Y	Y	......	70	M, W, F	7.30-9.30	[2] Y	......	3.00	3.75	91
Des Moines	86,368	10,395	Y	Y	......	60	M, T, Th	7.30-9.30	[2] Y	Y	2.00-2.50	3.00	80
Dubuque	38,494	6,089	Y	Y	......	58	M, T, Th	7.30-9.30	Y	......	2.00	......	40
Marshalltown	13,374	1,430	N	N	Y	......	M, T, W, Th, F	7.30-8.30	......	......	......	......	10
Mason City	11,230	1,508	Y	Y	......	40	T, Th	7.30-9.30	[2] Y	Y	[3] 1.00	......	34
Ottumwa	22,012	1,745	Y	Y	......	60	M, W, F	7.30-9.30	N	N	1.75	......	12
Sioux City	47,828	10,452	Y	Y	......	48	M, W, F	7.00-9.30	Y	N	2.00	[1] 50.00	158
KANSAS.													
Council Grove	2,545	138	Y	Y	......	......	M, T, W, Th	7.30-9.30	N	N	[4] 8.00	[4] 10.00	105
Garden City	3,171	165	N	Y	......	......	T, Th	7.30-9.00	N	......	0	0	5
Kansas City	82,331	10,344	Y	Y	......	60	M, W, F	7.30-9.30	N	N	2.00-3.00	......	48
Parsons	12,463	463	Y	......	......	......	......	......	......	......	......	......	......
Pittsburg	14,755	1,137	Y	......	......	......	......	......	......	......	......	......	......
Roseland	396	......	Y	Y	......	72	M, W, F	6.30-9.00	N	......	[1] 30.00	......	3
Topeka	43,684	4,153	Y	Y	......	90	M, W, F	7.30-9.30	N	......	[3] 1.00	......	80

[1] Per month.

[2] For certain pupils.

[3] Per hour or period.

[4] Per week.

TABLE 6.—*Statistics relating to evening schools, 1914–15*—Continued.

[NOTE.—Y indicates Yes; N indicates No; ...... indicate No data.]

Cities and towns.	Census of 1910.		Evening schools.			Sessions.			Fees.	Deposits.	Salaries (per evening unless otherwise indicated).		Enrollment of foreign pupils.
	Population.	Foreign-born whites.	Public.	Public, with classes for foreigners.	Private, with classes for foreigners.	Number of sessions.	Evenings of week.	Hours.			Teachers.	Principals.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
KENTUCKY.													
Covington	53,270	3,933	Y	N	......	96	M, W, F	7.30–9.30	N	......	......	......	......
Dayton	6,979	564	Y	N	......	36	M, W, F	7.00–9.00	......	......	......	......	......
Lexington	35,099	936	Y	Y	......	......	M, W, Th	7.30–9.30	[1] Y	......	$1.50	$2.00	15
Louisville	223,928	17,436	Y	Y	......	111	M, T, W, Th, F	7.30–9.30	[1] Y	......	1.50	2.50	......
Maysville	6,141	139	Y	N	......	......	......	......	Y	......	......	......	......
Owensboro	7,733	143	Y	N	N	24	......	......	......	......	......	......	......
LOUISIANA.													
La Fayette	6,392	187	Y	N	......	......	......	......	......	......	......	......	......
New Orleans	339,075	27,686	Y	Y	......	70	M, W, F	7.30–9.30	N	......	2.75	3.25	142
MAINE.													
Auburn	15,064	2,574	Y	Y	......	39	M, W, F	7.00–8.45	Y	......	1.50–2.00	2.00	167
Bath	9,396	1,315	Y	Y	......	100	M, T, W, Th	7.15–9.15	N	......	2.00	4.00	12
Hallowell	2,864	309	Y	Y	......	18	M, W, Th	7.00–9.00	N	......	1.00	1.25	32
Lewiston	26,247	9,418	Y	Y	......	80	M, T, Th, F	7.10–9.00	N	Y	1.25–2.00	2.00–2.50	346
Portland	58,571	12,078	Y	Y	......	84	M, T, W, Th	7.15–9.15	N	......	2.00–3.00	3.00	......
Rumford	6,777	2,634	Y	Y	......	60	M, T, Th	7.00–8.30	Y	......	1.00–1.50	1.50	92
Skowhegan	5,341	783	Y	Y	......	72	M, W, F	7.00–9.00	N	......	1.50	2.00	14
Waterville	11,458	2,688	Y	Y	......	100	M, T, Th, F	7.15–8.30	N	Y	1.00	......	70
MARYLAND.													
Baltimore	558,485	77,043	Y	Y	......	65	......	7.30–9.30	N	......	2.00	3.00	2,103
MASSACHUSETTS.													
Adams	13,026	5,097	Y	Y	......	42	M, T, Th	7.15–9.00	N	......	1.50	2.00	176
Attleboro	16,215	4,453	Y	Y	......	42	M, T, Th	7.30–9.15	[1] Y	......	1.50	2.50	127

Belmont	5,542	1,572	Y	Y	....	63	M, W, F	7.30-9.30	N	N	2.00	....	32
Beverly	18,650	4,661	Y	Y	....	73	M, T, W, Th	7.15-9.15	N	Y	2.00	4.00	227
Boston	670,585	240,722	Y	Y	....	88	M, T, W, Th	7.15-9.15 7.30-9.30	[1] Y	Y	2.00	4.00	8,500
Bridgewater	7,688	2,317	Y	....	....	....	....	....	....	....	....	....	....
Brockton	56,878	15,425	Y	Y	....	60	M, T, Th	7.00-9.00	Y	Y	2.00	3.50-4.50	....
Brookline	27,792	8,345	Y	Y	....	62	M, W, F	7.15-9.15	....	....	....	....	....
Cambridge	104,839	34,608	Y	Y	....	57	M, W, F	7.30-9.30	N	Y	1.50-2.00	3.50	1,506
Canton	4,797	1,156	Y	Y	....	....	....	....	....	....	....	....	152
Chelsea	32,452	13,748	Y	Y	....	60	M, T, Th	7.30-9.30	N	Y	1.50-2.00	4.00	917
Chicopee	25,401	10,036	Y	Y	....	....	....	....	....	....	1.50	....	....
Clinton	13,075	4,798	Y	Y	....	58	M, T, W	7.00-9.00	[1] Y	Y	2.00	[2] 250.00	257
Easthampton	8,524	3,077	Y	Y	....	30	M, T, W	7.15-9.00	....	[1] Y	1.00	1.50	238
Everett	33,484	9,607	Y	Y	....	60	M, T, Th	7.30-9.30	N	Y	2.00-2.50	[2] 400.00	125
Fall River	119,295	50,854	Y	Y	....	46	M, W, Th	7.00-9.00 7.15-9.15	N	....	1.25-1.50	2.50-3.00	1,563
Fitchburg	37,826	13,611	Y	Y	....	100	M, T, W, Th	7.00-9.00	N	Y	1.10	2.10	541
Framingham	12,948	3,156	Y	Y	....	30	M, T, Th	7.15-9.00	N	Y	2.00	3.33	302
Franklin	5,641	1,504	Y	Y	....	20	T, Th	7.30-9.30	N	....	1.50-2.00	2.50	100
Gardner	14,699	5,312	Y	Y	....	37	M, T, Th	7.00-9.00	....	Y	.75-1.25	5.00	527
Gloucester	24,398	7,484	Y	Y	....	32	T, Th	7.00-9.00	N	N	....	....	100
Greenfield	10,427	1,918	Y	Y	....	75	M, W, F	7.00-9.00	N	N	1.35	....	96
Haverhill	44,115	11,153	Y	Y	....	60	M, T, W, Th	7.00-9.00	N	N	1.00	3.00	574
Holyoke	57,730	23,238	Y	Y	....	55	M, W, F	7.15-9.15	N	N	1.50	5.00	860
Hudson	6,743	1,790	Y	....	....	....	....	....	....	....	....	....	....
Lawrence	85,892	41,319	Y	Y	....	66	M, W, Th	7.00-9.00	N	....	1.50	2.50-5.00	1,661
Leominster	17,580	4,875	Y	Y	....	44	M, W, Th	7.00-9.00	[1] Y	Y	1.00-1.50	3.00	324
Lowell	106,294	43,457	Y	Y	....	71	M, T, Th, F	7.00-9.00	N	....	1.25	2.00	....
Lynn	89,336	27,344	Y	Y	....	78	M, T, Th	7.30-9.30	[1] Y	....	2.00	5.00	686
Malden	44,404	13,430	Y	Y	....	71	M, T, Th	7.30-9.30	N	Y	2.00	5.00	225
Marlboro	14,579	3,344	Y	Y	....	50	M, W, F	7.00-9.00	[1] Y	[1] Y	1.50	2.00	95
Medford	23,150	5,126	Y	Y	....	47	M, W, F	7.30-9.30	....	[1] Y	2.00	4.00	30
Methuen	11,448	4,501	Y	Y	....	57	M, W, Th	7.15-9.15	N	N	[3] .75	[3] 1.50	90
Milford	13,055	4,331	Y	Y	....	38	M, T, W	7.30-9.00	N	....	1.50	2.00-3.00	....
Montague	6,866	1,936	Y	....	....	....	M, W, Th	7.30-9.30	N	....	1.50	2.00	....
Natick	9,866	1,997	Y	Y	....	42	M, W, F	7.30-9.00	[1] Y	....	2.00	2.50	93
Needham	5,026	1,584	Y	Y	....	43	M, W, F	7.30-9.00	N	N	1.50	2.00	66
New Bedford	96,652	42,625	Y	Y	....	38	M, W	7.15-9.15	N	[1] Y	2.00	3.00-3.50	1,857
Newburyport	14,949	3,007	Y	Y	....	54	M, W, F	7.30-9.00	N	N	1.50	3.00	311
Newton	39,806	11,191	Y	Y	....	52	M, W, F	7.30-9.00	[1] Y	Y	2.00	3.00-4.00	523
North Adams	22,019	6,046	Y	Y	....	43	M, T, Th	7.00-9.00	N	[1] Y	1.50	2.00	100
Northampton	19,431	4,880	Y	Y	....	60	M, T, Th	7.45-9.15	N	[1] Y	1.00	2.00	178
North Attleboro	9,562	2,490	Y	Y	....	48	M, T, Th	7.30-9.30	N	....	1.50-2.00	....	45
Northbridge	8,807	3,560	Y	Y	....	32	M, T, Th—M, W, F	7.30-9.00	N	Y	1.40	....	147
Norwood	8,014	2,555	Y	Y	....	70	M, T, W, Th	7.30-9.00	[1] Y	....	2.00	3.00	160
Palmer	8,610	3,074	Y	Y	....	24	M, W	7.00-9.00 7.30-9.30	N	N	1.50	2.00	295
Peabody	15,721	5,341	Y	Y	....	51	M, W, F	7.30-9.30	N	N	1.00	2.00	377
Pittsfield	32,121	6,744	Y	Y	....	49	M, W, F	7.30-9.30	N	N	1.50-2.50	5.00	....
Plymouth	12,141	3,722	Y	....	....	....	....	....	....	....	....	....	....

[1] For certain pupils.

[2] Per year.

[3] Per hour or period.

TABLE 6.—*Statistics relating to evening schools, 1914-15*—Continued.

[NOTE.—Y indicates Yes; N indicates No; ...... indicate No data.]

Cities and towns.	Census of 1910.		Evening schools.			Sessions.			Fees.	Deposits.	Salaries (per evening unless otherwise indicated).		Enrollment of foreign pupils.
	Population.	Foreign-born whites.	Public.	Public, with classes for foreigners.	Private, with classes for foreigners.	Number of sessions.	Evenings of week.	Hours.			Teachers.	Principals.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
MASSACHUSETTS—continued.													
Quincy	32,642	10,875	Y	Y	......	80	M, W, F	7.00- 9.00	N	[1] Y	$2.00	$3.00	634
Revere	18,219	5,331	Y	Y	......	40	M, T, Th	7.30- 9.30	N	Y	2.00	2.50	106
Rockland	6,928	1,110	N	N	Y	42	M, W, F	7.00- 9.00	N	......	0	......	42
Salem	43,697	13,539	Y	Y	Y	55	M, T, W, Th	7.30- 9.00	[1] Y	Y	1.25	2.50	500
Shirley	2,139	......	Y	Y	......	40	M, T, W	7.00- 8.30	N	......	[2] 1.00	......	25
Somerville	77,236	20,751	Y	Y	......	77	M, T, Th, F	7.30- 9.30	N	N	1.50-2.00	4.00-5.00	500
Southbridge	12,592	4,315	Y	Y	......	30	M, T, W	7.00- 8.30	N	N	1.00	1.50	313
Springfield	88,926	22,999	Y	Y	......	67	M, W, Th	7.00- 9.00	[1] Y	Y	1.50-2.00	3.50	1,653
Stoneham	7,090	1,362	Y	Y	......	60	M, W, F	7.30- 9.30	N	Y	2.00	3.00	30
Stoughton	6,316	1,439	Y	Y	......	36	M, W	7.00- 9.00	N	Y	2.00	2.00	76
Swampscott	6,204	1,369	N	N	Y	......	......	......	......	......	......	......	......
Taunton	34,259	9,779	Y	Y	......	48	M, T, W	7.30- 9.30	......	Y	1.50-1.75	3.00	515
Wakefield	11,404	3,128	Y	Y	......	60	M, T, Th	7.30- 9.00	N	[1] Y	1.50	3.00	119
Waltham	27,834	7,683	Y	Y	......	59	M, W, F	7.15- 9.15	N	[1] Y	2.50	4.00	250
Ware	8,774	3,223	Y	Y	......	65	M, T, Th	7.00- 9.00	N	......	1.50-2.50	2.50	180
Watertown	12,875	4,057	Y	Y	......	57	M, W, Th	7.30- 9.00	......	[1] Y	1.50-2.50	4.00	151
Webster	11,509	4,096	Y	Y	......	100	M, T, W, Th	7.00- 9.00	N	......	2.00	3.00	100
Wellesley	5,413	1,559	Y	Y	......	60	M, W, F	7.30- 9.00	N	......	2.00	2.00-2.50	81
Westfield	16,044	4,401	Y	Y	......	42	M, W, F	7.15- 9.15	N	......	[3] 5.00	[3] 8.00	340
West Springfield	9,224	2,100	Y	Y	......	61	M, T, W, Th	7.00- 9.00	N	[1] Y	1.50	2.00	91
Whitman	7,292	1,108	Y	N	......	30	M, T, W	7.30- 9.30	N	Y	......	......	......
Winchester	9,309	2,486	Y	Y	......	50	M, T, Th	7.30- 9.00	N	......	1.50	2.50	164
Winthrop	10,132	2,093	Y	Y	......	46	M, W, Th	7.30- 9.30	N	......	2.50	4.00	46
Woburn	15,308	4,039	Y	Y	......	35	M, W, F	7.30- 9.30	N	N	1.50	2.00	131
Worcester	145,986	48,492	Y	Y	......	108	M, T, W, Th, F	7.15- 9.15	N	Y	1.00-1.50	......	1,911
MICHIGAN.													
Albion	5,833	775	Y	Y	......	......	M, T, W, F	7.00- 9.00	N	......	2.50	......	......
Alpena	12,706	3,586	Y	Y	......	51	M, W, F	7.00- 9.00	Y	......	[3] 4.00	......	......

Battle Creek	25,267	2,616	Y	Y	...	...	M, W—T, Th	7.30- 9.00	N	Y	1.50	...	75
Bay City	45,166	11,027	Y	Y	...	80	M, T, W, Th	7.00- 9.00	N	N	2.00	...	12
Calumet	32,845	...	Y	Y	...	80	M, T, W, Th F	7.30- 9.30	N	...	2.00	...	125
Detroit	465,766	156,565	Y	Y	...	79-100	M, T, W, Th	7.00- 9.00	[1] Y	Y	2.00-2.50	3.50-4.00	4,000
Flint	38,550	6,662	Y	Y	...	57	M, T, Th	7.00- 9.00	Y	Y	1.00	2.50	50
Grand Rapids	112,571	28,335	Y	Y	...	...	M, W, F	7.30- 9.30	N	Y	2.00	2.50-3.00	843
Ironwood	12,821	6,234	Y	Y	...	80	M, T, W, F	7.30- 9.00	Y	N	1.50	...	104
Jackson	31,433	4,507	Y	Y	...	80	M, T, W, Th	7.15- 9.15	N	Y	2.00	...	60
Kalamazoo	39,437	6,857	Y	Y	...	59	M, T, Th	7.30- 9.00	Y	...	2.00	3.00	50
Lansing	31,229	3,973	Y	Y	...	75	M, W—T, Th	7.15- 9.15	N	Y	1.00-2.50	2.50	60
McMillan Township (Newberry)	458	...	Y	Y	...	66	M, W, Th	7.00- 9.00	Y	Y	...	...	41
Munising	2,952	1,048	Y	Y	...	36	M, T, Th	8.00-10.00	Y	...	[3].50	...	80
Muskegon	24,062	6,252	Y	Y	...	60	M, W, F	7.15- 9.15 7.30- 9.00	N	Y	1.50-2.50	2.00-3.50	210
Port Huron	18,863	5,979	Y	Y	...	60	M, W, Th	7.00- 9.00	N	...	1.50	2.00	6
Saginaw:													
East side	50,510	11,701	Y	Y	...	40	M, W	7.00- 9.00	N	...	[2] 2.00	...	17
West side			Y	Y	...	...	...	7.00- 9.00	N	Y	1.50-2.00	2.00	85
Traverse City	12,115	2,009	Y	Y	...	20	M	7.00- 9.00	N	...	1.00	...	35
MINNESOTA.													
Chisholm	7,684	4,469	Y	...	...	...	...	...	...	...	...	...	...
Duluth	78,466	30,652	Y	...	...	...	...	...	...	...	...	...	...
East Grand Forks	2,533	773	Y	Y	...	48	T, W, Th	7.15-9.15	N	Y	1.00	...	5
Ely	3,572	1,713	Y	Y	...	76	M, T, W	4-6, 7-9	N	Y	[4].75	...	71
Eveleth	7,036	3,761	Y	Y	...	87	T, W, Th	7.30-9.30	Y	N	[4]1.00	...	223
Faribault	9,001	1,443	Y	...	...	...	...	...	...	...	...	...	...
Gilbert	1,700	...	Y	Y	...	96	M, T, W, Th	7.30-9.00	N	...	[4]1.00	2.50	325
Hibbing	8,832	4,342	Y	Y	...	115	M, W, F	7.30-9.30	N	...	[4]1.00	[4]2.00	684
Minneapolis	301,408	85,938	Y	Y	...	61-81	[5] M, T, W	7.30-9.30	N	Y	2.50	3.00	2,856
St. Paul	214,744	56,524	N	N	Y	72	M, T, Th, F	7.30-9.30	Y	N	2.25	...	400
Virginia	10,473	5,340	Y	Y	...	139	M, T, W, Th, F	7.30-9.30	N	N	[4]1.00	...	900
MISSISSIPPI.													
Greenville	9,610	296	Y	Y	...	120	...	...	...	...	...	...	6
MISSOURI.													
Hannibal	18,341	774	Y	N	...	40	T, Th	7.30-8.30 9.30	Y	N	1.00	...	...
Kansas City	248,381	25,327	Y	Y	...	70	M, T, Th	7.30-9.30	N	[1] Y	3.00	4.00	240
Kirksville	6,347	135	Y	N	...	150	M, T, W, Th, F	6.30-9.30	Y	N	...	...	...
Poplar Bluff	6,916	132	Y	...	...	...	...	...	...	...	...	...	...
St. Joseph	77,403	8,113	N	N	Y	...	M, T, W, Th, F	7.00-9.30	Y	...	...	...	65
St. Louis	687,029	125,706	Y	Y	...	75	M, W, Th—M, W, F	7.00-9.00 7.30-9.30	N	...	2.75	3.50-7.00	1,963
NEBRASKA.													
Hastings	9,338	1,439	Y	...	...	...	...	...	...	...	...	...	...
Lincoln	43,973	7,200	Y	Y	...	108	M, T, W, Th	7.30-9.00	N	Y	[6]25.00	[6]30.00	779
Omaha	124,096	27,068	Y	Y	...	80	M, T, W. Th	7.30-9.30	...	[1] Y	[6]45.00	[6]50.00	1,238

[1] For certain pupils.
[2] And expenses.
[3] Per week.
[4] Per hour or period.
[5] High school has Thursday in addition.
[6] Per month.

TABLE 6.—*Statistics relating to evening schools, 1914–15*—Continued.

[NOTE.—Y indicates Yes; N indicates No; ...... indicate No data.]

Cities and towns.	Census of 1910.		Evening schools.			Sessions.			Fees.	Deposits.	Salaries (per evening unless otherwise indicated).		Enrollment of foreign pupils.
	Population.	Foreign-born whites.	Public.	Public, with classes for foreigners.	Private, with classes for foreigners.	Number of sessions.	Evenings of week.	Hours.			Teachers.	Principals.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
NEW HAMPSHIRE.													
Claremont	7,529	1,819	Y	Y	......	34	M, T, W	7.15–8.45	N	......	$0.75	$1.25	......
Concord	21,497	4,309	Y	Y	......	50	M, T, W, Th	7.30–9.00	......	N	2.00	3.00	105
Dover	13,247	3,296	Y	Y	......	84	M, T, Th, F	7.00–9.00	N	N	1.50	2.00	165
Manchester	70,063	29,692	Y	Y	......	82	M, T, W, F	7.30–9.00	......	Y	1.00	2.00	702
Nashua	26,005	8,957	Y	Y	......	72	M, T, Th, F	7.00–9.00	......	Y	1.50	2.50	......
Portsmouth	11,269	2,138	N	N	Y	......	......	......	N	......	......	......	......
NEW JERSEY.													
Atlantic City	46,150	6,400	Y	Y	......	74	M, T, W, Th	7.15–9.15	N	Y	2.50	3.00–4.00	......
Bayonne	55,545	20,522	Y	Y	......	68	M, T, W, Th	7.00–9.00	N	[1] Y	2.00	3.00	......
Bloomfield	15,070	3,359	Y	Y	......	64	M, T, W, Th	7.30–9.30	N	......	2.50	3.25	85
Bordentown	4,250	349	Y	Y	......	64	M, T, W, Th	7.00–9.00	N	Y	[2] 80.00	......	24
Bridgeton	14,209	691	Y	Y	......	......	M, T, W, Th	7.30–9.30	N	......	0	0	......
Camden	94,538	15,682	Y	Y	......	......	......	......	......	......	......	......	......
Elizabeth	73,409	23,894	Y	Y	......	65	M, T, W Th	7.15–9.15 7.30–9.30	N	Y	2.50	4.00	676
Englewood	9,924	2,500	Y	Y	......	64	M, T, Th	8.00–10.00	N	[1] Y	3.00	......	122
Garfield	10,213	5,365	Y	Y	......	......	......	......	......	......	......	......	......
Garwood	1,118	......	Y	Y	......	64	M, T, W, Th	7.30–9.30	N	Y	2.00	3.00	70
Hackensack	14,050	3,255	Y	Y	......	64	M, T, W, Th	7.30–9.30	N	......	3.00	4.00	125
Haddonfield	4,142	262	Y	N	......	64	M, T, W, Th	7.00–9.00	N	......	......	......	......
Hammonton	5,088	1,548	Y	......	......	......	......	......	......	......	......	......	......
Hoboken	70,324	27,668	Y	Y	......	64	M, T, Th, F	7.30–9.30	N	Y	3.00–4.00	6.00	917
Irvington	11,877	2,480	Y	N	......	......	......	......	N	......	......	......	......
Jersey City	267,779	77,697	Y	Y	......	[3] 72	M, T, Th, F	7.30–9.30	N	Y	2.00	4.00	1,199
Kearney	18,659	6,024	Y	Y	......	64	M, T, W, Th	7.30–9.30	N	......	2.50	......	58
Linden	610	......	Y	Y	......	64	M, T, Th, F	7.30–9.30	N	......	2.50	......	48
Long Branch	13,298	2,529	Y	Y	......	64	M, T, W, Th	7.30–9.30	N	[1] Y	2.50	3.50	98
Montclair	21,550	5,141	Y	Y	......	69	M, T, W, Th	7.30–9.30	......	Y	2.50	3.00	236

Morristown	12,507	2,657	Y	Y	......	64	M, T, W, Th	7.15-9.15	N	Y	3.00	......	67
Newark	347,469	110,655	Y	Y	......	[4] 92	[5] M, T, Th, F	7.30-9.30	N	N	3.00	4.00	3,974
New Brunswick	23,388	6,048	Y	Y	......	70	M, T, Th, F	7.00-9.00	N	Y	2.00	2.50	125
Newton	4,467	372	Y	Y	......	68	M, T, W, Th	7.30-9.30	N	N	2.00	2.50	32
Orange	29,630	8,069	Y	Y	......	90	M, T, Th, F	7.30-9.30	N	N	2.50-3.00	3.50	145
Passaic	54,773	28,467	Y	Y	......	69	M, T, W, Th	7.30-9.30	N	......	2.00	3.00	949
Paterson	125,600	45,398	Y	Y	......	64	M, T, W, Th	7.15-9.15	N	N	2.50	3.00	228
Perth Amboy	32,121	14,288	N	N	Y	......	......	......	......	......	......	......	......
Plainfield	20,550	4,144	Y	Y	......	68	M, T, W, Th	7.30-9.30	N	......	2.00	2.50	251
Princeton	5,136	836	N	N	Y	150	M, T, W, Th, F	8.00-9.00	Y	......	0	0	31
Rahway	9,337	1,659	Y	......	......	......	......	......	......	......	......	......	......
Red Bank	7,398	993	Y	......	......	......	......	......	......	......	......	......	......
Ridgewood	5,416	768	Y	Y	......	64-80	M, T, W, Th	7.30-9.30	N	......	......	......	2
Summit	7,500	2,024	Y	Y	......	90	M, T, W, Th	7.30-9.30	N	N	3.00	......	93
Tenafly	2,756	803	Y	Y	......	64	M, T, W, Th	7.00-9.00	N	......	[2] 125.00	......	28
Trenton	96,815	26,310	Y	Y	......	76	M, T, W, Th	7.15-9.15	Y	Y	2.50	......	......
Westfield	6,420	1,057	Y	......	......	......	......	......	......	......	......	......	......
West Hoboken	35,403	13,713	Y	Y	......	64	M, T, W, Th	7.30-9.30	N	Y	3.00	......	381
West New York	13,560	3,556	Y	Y	......	64	M, T, W, Th	7.30-9.30	N	Y	2.50	2.50	137
NEW MEXICO.													
Albuquerque	11,020	1,269	Y	Y	......	48	M, W, F	7.00-9.00	N	......	2.00	2.50	15
NEW YORK.													
Albany	100,253	18,165	Y	Y	......	96	M, T, W, Th	7.30-9.00	N	Y	1.50	3.00-4.00	218
Amsterdam	31,267	10,624	Y	Y	......	60	M, W, F	7.30-9.30	N	......	[6] 1.00	[6] 1.00	240
Auburn	34,668	7,620	Y	Y	......	42	T, F	7.30-9.30	Y	Y	1.50-2.50	4.00	226
Batavia	11,613	2,133	Y	Y	......	40	T, Th	7.30-9.30	[1] Y	Y	[6] 1.00	3.00	45
Binghamton	48,443	7,389	Y	Y	......	......	......	......	......	......	......	......	......
Buffalo	423,715	118,444	Y	Y	......	74	M, W, F	7.30-9.30	N	Y	2.00-2.50	4.50-5.50	2,622
Cohoes	24,709	7,373	Y	Y	......	36	M, W, F	7.00-9.00	N	N	2.00	......	300
Corning	13,730	1,795	Y	Y	......	44	T, Th	7.00-9.00	Y	......	2.00	......	100
Dunkirk	17,221	5,146	Y	Y	......	38	T, F	7.30-9.30	N	......	2.50	......	200
Elmira	37,176	5,259	Y	Y	......	59	M, T, Th	7.15-9.15	Y	Y	2.00	3.00	83
Fulton	10,480	1,783	Y	Y	......	43	M, T, W	7.30-9.00	N	......	1.50	3.00	72
Geneva	12,416	2,215	Y	Y	......	70	M, W—T, Th	7.00-9.00	......	Y	[6] 1.00	......	48
Gloversville	20,642	4,008	Y	Y	......	50	T, W, Th	7.15-9.15	N	......	1.00-1.50	2.00	206
Hudson	11,417	2,209	Y	Y	......	40	M, W, Th	7.30-9.15	......	Y	......	......	133
Hudson Falls	5,189	522	Y	Y	......	20	M, W	7.00-9.00	N	N	0	0	64
Huntington	12,004	......	Y	Y	......	60	M, W, Th	7.30-9.30	N	......	2.10	......	40
Ithaca	14,802	1,589	Y	Y	......	39	M, Th	7.30-9.45	Y	Y	2.50	......	......
Jamestown	31,297	10,612	Y	Y	......	58	M, W, F	7.30-9.00	N	......	1.50	3.00	......
Johnstown	10,447	1,941	Y	Y	......	50	M, T, W, Th	7.30-9.30	N	N	1.00	2.00	50
Lackawanna	14,549	7,227	N	N	Y	......	M, T, W, Th, F	7.45-9.15	N	......	......	......	310
Little Falls	12,273	3,915	Y	Y	......	29	T, Th	7.30-9.00	N	......	1.00	1.50	......
Lockport	17,970	3,235	Y	......	......	......	......	......	......	......	......	......	......
Mamaroneck	5,699	1,641	Y	Y	......	61	T, W, Th	7.30-9.30	N	N	1.50-4.00	4.00	49
Mount Vernon	30,919	8,029	Y	Y	......	88	M, T, W, Th	7.30-9.30	N	Y	2.00-2.75	4.50	219

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[1] For certain pupils.
[2] Per year.
[3] High school, 90.
[4] Foreign pupils. Other sections vary from 76 to 155.
[5] In certain quarters Wednesday is substituted for Friday.
[6] Per hour or period.

TABLE 6.—*Statistics relating to evening schools, 1914–15*—Continued.

[NOTE.—Y indicates Yes; N indicates No; ...... indicate No data.]

Cities and towns.	Census of 1910.		Evening schools.			Sessions.			Fees.	Deposits.	Salaries (per evening unless otherwise indicated).		Enrollment of foreign pupils.
	Population.	Foreign-born whites.	Public.	Public, with classes for foreigners.	Private, with classes for foreigners.	Number of sessions.	Evenings of week.	Hours.			Teachers.	Principals.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
NEW YORK—continued.													
Newburgh	27,805	4,828	Y	Y	......	48	M, W, F	7.30-9.30	N	......	$2.00	[1] $50.00	80
New Rochelle	28,867	8,677	Y	Y	......	70	M, T, W, Th	7.30-9.30	N	Y	3.00-3.50	3.50-4.00	363
New York	4,766,883	1,927,703	Y	Y	......	[3] 90	M, T, W, Th	[3] 7.15-9.15 8.00-10.00	N	N	3.00	5.00	36,923
Niagara Falls	30,444	12,064	Y	Y	......	44	M, T, Th, F	7.30-9.30	N	Y	1.50-2.00	2.50	100
North Tonawanda	11,955	3,628	Y	Y	......	39	M, T, W	7.30-9.30	......	Y	2.00	2.25	71
Olean	14,743	2,424	Y	Y	......	46	M, W, F	7.30-9.30	Y	Y	2.00	2.00	151
Peekskill	15,245	2,305	Y	Y	......	20	......	......	Y	......	0	0	15
Poughkeepsie	27,936	4,534	Y	Y	......	85	M, T, W, Th	7.30-9.30	N	N	1.50	2.00	167
Rochester	218,149	58,993	Y	Y	......	72	M, T, Th	7.30-9.15	N	Y	2.00-2.50	4.00-5.00	2,320
Rockville Center	3,667	420	Y	Y	......	60	M, T, Th	7.30-9.30	N	......	1.25	......	70
Rome [4]	20,497	4,114	N	N	Y	50	T, Th	7.30-9.00	Y	N	......	......	302
Schenectady	72,826	18,631	Y	Y	......	72	M, T, W, Th	7.00-9.00 7.30-9.30	N	Y	2.00	3.00	406
Solvay	5,139	1,663	Y	Y	......	51	M, T, Th	7.00-9.00	......	Y	2.00	3.00	80
Syracuse	137,249	30,781	Y	Y	......	80	M, T, W, Th	7.15-8.45	N	[5] Y	2.00	2.50	1,278
Troy	76,813	15,432	Y	Y	......	66	M, T, W	7.00-9.00	N	Y	3.00	5.00	2.50
Utica	74,419	21,308	Y	Y	......	......	......	7.30-9.00	......	Y	2.00	3.00	......
Watertown	26,730	6,268	Y	Y	......	40	M, T, W, Th	7.00-9.00	N	......	1.25	......	80
White Plains	15,949	3,898	Y	Y	......	53	M, T, W, Th	7.30-9.00	N	[5] Y	[6] 1.00	[7] 200.00	76
Yonkers	79,803	26,590	Y	Y	......	82	M, T, W, Th	7.30-9.30	N	......	3.00-3.50	......	550
NORTH CAROLINA.													
Charlotte	34,014	472	[8] Y	N	......	48-76	......	7.30-9.00 8.00-9.30	Y	......	......	......	......
Concord	8,715	21	Y	N	......	20	T, F	7.30-9.00	N	......	0	0	......
Durham	18,241	228	Y	N	......	100	M, T, W, Th	7.30-9.00	Y	......	......	......	......
Raleigh	19,218	151	Y	N	......	48	M, W, F	7.30-10.30	Y	......	......	......	......
Salisbury	7,153	72	[8] Y	N	......	16	M, W, F	7.00-9.00	N	......	0	0	......

OHIO.													
Akron	69,067	13,241	N	N	Y	96	M, T, W, Th	7.00-8.30	N		[6] .50	[6] 1.00	1,525
Ashtabula	18,266	4,710	Y	Y		31	M, W, F	7.00-9.00	N		1.50		2.00
Barberton	9,410	2,829	Y	Y		20	M, Th	7.00-8.30	Y		1.25		64
Chillicothe	14,508	618	Y	N		168	M, T, W, Th, F, S	6.15-9.00	Y		[6] 1.00		
Cincinnati	363,591	56,792	Y	Y		80	M, T, W, Th	7.30-9.30	N	N	2.50	3.00	405
Cleveland	560,663	195,708	Y	Y		87	M, T, W, Th	7.00-9.00	[5] Y	[5] Y	2.00-2.50	2.00-2.50	11,383
Columbus	181,511	16,285	Y	Y			M, T, W—M, W, F	7.00-9.00	N	N	2.00	3.00	666
Conneaut	8,319	1,533	Y	N		40	M, W	7.00-9.00	Y		[10] 3.00		
Coshocton	9,603	456	Y	Y		54	M, T, W, Th, F	7.00-9.00	Y	N	3.00		120
Dayton	116,577	13,847	Y	Y		72	T, Th, F	7.30-9.30	N		[6] 1.00		200
Elyria	14,825	3,061	Y	Y		60	T, F	7.30-9.00	N		1.00- 2.00	2.00	100
Greenville	6,237	188	Y	N		32	M, W	7.00-9.00	Y				
Hamilton	35,279	3,309	N	N	Y	48	T, F	7.30-9.00			1.50		34
Ironton	13,147	466	Y										
Middletown	13,152	1,192	Y	Y		60	T, W, Th	7.15-9.15	N	N	[6] 1.00	[6] 2.00	79
Nelsonville	6,082	270	Y	N		20	T, W, Th, F	6-8; 7-8	Y	N			
Niles	8,361	2,502	Y										
Norwood	16,185	1,385	Y	Y		96	M, T, W, Th	7.30-9.30	[5] Y	Y	2.50	3.00	25
Oberlin	4,365	266	Y	Y		32	M, W	7.00-8.30	N	N	0		3
Piqua	13,388	752	Y	Y		40	T, Th	7.00-9.30	[5] Y	N	[6] 1.00		
Steubenville	22,391	5,214	Y	Y		72	M, T, Th	7.00-9.15	N		[1] 25.00		
Toledo	168,497	32,037	Y	Y		69	M, W, F	7.00-8.30 7.30-9.00	N	Y	2.50		636
Y. M. C. A.					Y	74	M, W, F	7.15-9.15					90
Warren	11,081	1,352	Y										
OKLAHOMA.													
Durant	5,330	52	Y	N									
Muskogee	25,278	537	Y	N		90	M, W, F	7.30-9.00					
Tulsa	18,182	412	Y	N		84	M, W, F	7.30-9.00	N	N	[1] 20.00	[1] 25.00	
OREGON.													
Astoria	9,599	4,088	Y	Y		36	M, W, F	7.00-9.00	[5] Y	N	[1] 30.00	[1] 30.00	368
Baker City	6,742	603	N	N	Y		T, Th	8.00-9.30	Y	N			10
Portland	207,214	43,780	Y	Y		76	M, W, Th	7.15-9.15	N		[1] 30.00	[1] 40.00	1,642
PENNSYLVANIA.													
Allentown	51,913	6,234	Y	N		164-190	M, T, W, Th, F	7.00-9.00	N	N	[1] 35.00	[1] 40.00	
Altoona	52,127	5,212	Y	Y		80	M, W, F	7.30-9.45	Y	N	[6] 1.00		200
Ambridge	5,205	1,973	N	N	Y	72	M, Th—T, F	7.00-9.00	Y	N	[8] 20.00-50.00		125
Archbald	7,194	2,604	Y	Y		60	M, T, W, Th, F	7.00-9.00	N		[1] 36.00		40
Ashley	5,601	1,637	Y			60	M, T, W, Th, F	7.00-9.00	N				
Beaver Falls	12,191	2,851	Y										
Berwick	5,357	365	N	N	Y								
Bethlehem	12,837	797	N	N	Y	50-60	T, Th	8.00-10.00	Y		0		

---

[1] Per month.

[2] High and trade schools, 120.

[3] Opens any time between 7 and 8 and continues two hours.

[4] Rome leaves all work with foreigners to the Y. M. C. A. These data refer to the work of that organization.

[5] For certain pupils.

[6] Per hour or period.

[7] Per year.

[8] School conducted jointly by board of education and private organizations.

[9] Largely volunteer.

[10] Per week.

TABLE 6.—*Statistics relating to evening schools, 1914-15*—Continued.

[NOTE.—Y indicates Yes; N indicates No; ...... indicate No data.]

Cities and towns.	Census of 1910.		Evening schools.			Sessions.			Fees.	Deposits.	Salaries (per evening unless otherwise indicated).		Enrollment of foreign pupils.
	Population.	Foreign-born whites.	Public.	Public, with classes for foreigners.	Private, with classes for foreigners.	Number of sessions.	Evenings of week.	Hours.			Teachers.	Principals.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
PENNSYLVANIA—continued.													
Butler	20,728	3,510	N	N	Y	......	......	......	......	......	......	......	......
Carbondale	17,040	2,997	Y	......	......	......	......	......	......	......	......	......	......
Chambersburg	11,800	172	Y	N	......	48	M, Th	7.00-9.30	N	......	$2.00	......	......
Chester	38,538	6,673	Y	Y	......	96	M, T, W, Th	7.30-9.30	N	Y	2.00	$2.50	......
Coaldale	5,154	1,905	Y	Y	......	120	M, T, W, Th, F	6.30-9.00	N	......	[1] 45.00	[1] 125.00	65
Cokeburg	1,302	......	N	N	Y	56	M, Th	7.00-9.00	N	......	2.00	3.00	82
Columbia	11,454	657	Y	N	......	20	M, T, W, Th, F	7.30-9.30	N	......	......	......	......
Connellsville	12,845	1,587	Y	......	......	......	......	......	......	......	......	......	......
Donora	8,174	3,213	Y	Y	......	84	T, W, F	7.30-9.30	Y	Y	2.00	......	92
Dubois	12,623	2,122	Y	N	......	......	......	......	......	......	......	......	......
Duquesne	15,727	6,381	Y	......	......	......	......	......	......	......	......	......	......
Duryea	7,487	3,006	Y	Y	......	80	M, T, W, Th, F	7.00-9.00	N	Y	[1] 25.00	0	134
Easton	28,523	3,122	Y	Y	......	112	M, T, W, Th	7.30-9.30	N	N	[2] 1.00	[2] 1.25	65
East Pittsburgh	5,615	1,663	N	N	Y	106	M, W, F	6.30-9.00	Y	......	[1] 15.00-45.00	......	65
Edwardsville	8,407	3,538	Y	N	......	......	......	......	......	......	......	......	......
Erie	66,525	14,943	Y	Y	......	60	M, W, F	7.30-9.30	N	N	1.50	2.00	323
Ford City	4,850	2,314	Y	Y	......	72	M, W, F	7.30-9.30	Y	N	......	......	108
Grove City	3,674	134	Y	N	......	......	......	......	Y	......	......	......	......
Harrisburg	64,186	4,134	Y	Y	......	96	......	7.30-9.30	N	N	2.00	......	40
Hazleton	25,452	5,994	Y	Y	......	90	M, T, W, Th	7.15-9.15	N	......	1.50	[1] 250.00	148
Homestead	18,713	7,068	N	N	Y	124	M, T, W, Th, F	7.30-9.30	Y	......	2.50	......	55
Jeannette	8,077	1,774	Y	Y	......	80	M, W, F	7.00-9.00	N	N	2.00	......	100
Johnstown	55,482	15,316	Y	Y	......	52	M, W, F	7.30-9.30	......	Y	[2] 1.00	[2] 1.50	198
Kingston	6,449	1,884	Y	......	......	......	......	......	......	......	......	......	......
Lancaster	47,227	3,203	Y	Y	......	80	M, T, Th	7.15-9.15	N	......	2.00	......	26
Lansford	8,323	3,154	N	N	Y	50	T, Th	7.00-9.00	......	......	......	......	......
Luzerne	5,426	1,750	Y	Y	......	......	......	......	N	......	......	......	......
Mount Carmel	17,532	4,927	Y	Y	......	80	M, Th, F	7.00-9.00	N	......	[2] 1.00	......	......
Munhall	5,185	1,706	N	N	Y	......	......	......	......	......	......	......	......
Nanticoke	18,877	7,187	Y	Y	......	80	M, W, F	7.00-9.00	N	Y	2.00	......	......

New Castle	36,280	8,620	Y	Y		72	M, T, Th	7.30-9.30	N	Y	2.00	2.50	450
New Kensington	7,707	2,376	Y	N	Y			7.00-9.00	Y				
Norristown	27,875	4,015		Y									
North Braddock	11,824	3,365	Y										
Philadelphia	1,549,008	382,578	Y	Y		72	M, T, W	7.30-9.30	N	Y	2.00	3.33	9,087
Pittsburgh	533,905	140,436	Y	Y		60	(3)	7.30-9.30	N	Y	2.50-4.00	4.00-7.00	4,977
Reading	96,071	8,812	Y	Y		100	M, T, W, Th	7.30-9.30	N	N	1.50	2.00	213
Ridgway	5,408	1,145	N	N	Y	24	M, Th	7.30-9.00	Y		[2] 1.00		6
St. Marys	6,346	780	Y										
Sayre	6,426	516	Y	Y		42	M, W, F	7.15-9.15		Y	1.50		110
Scranton	129,867	35,112	Y	Y		80	M, T, W, Th	7.30-9.30	Y	N	2.00	2.50	177
Shamokin	19,588	2,788	Y	Y		70	M, W, F	6.30-8.30	N	Y	1.50		80
South Fork	4,592	1,127	Y					6.00-9.00	N				
Taylor	9,060	3,369	Y										
Throop	5,133	2,361	Y	Y		80	M, T, W, Th, F	7.00-9.00	N		[1] 30.00	[1] 30.00	
Titusville	8,533	1,554	Y	N	Y	115	M, T, W, Th, F	7.30-9.30	N	N			
Tyrone	7,176	221	Y	N		20	M, F	7.30-9.00	Y	N	2.00		
Uniontown	13,344	1,447	Y										
Wilkes-Barre	67,105	16,078	Y	Y		99	M, T, W, Th, F	7.00-9.00		Y	1.50		
Wilkinsburg	18,924	1,971	Y	Y		40	M, T, Th	7.15-9.15	N	Y	[2] 1.50		9
Wilmerding	6,133	2,112	Y	Y			M, Th—T, F	7.30-9.30	Y		1.00	1.00	172
RHODE ISLAND.													
Burrillville	7,878	2,454	Y	Y		56	M, W, F	7.30-9.00	N		1.00	2.00	
Central Falls	22,754	10,664	Y										
Coventry	5,848	1,346	Y	Y				6.45-8.45	N	Y	1.00	2.00	
Johnston	5,935	2,313	[4] Y	[4] Y		78-96	M, T, Th, F	7.00-9.00	[5] Y	Y			15
Lincoln	9,825	4,181	Y	Y		48-49	M, T, Th—M, W, F	7.00-9.00		Y	1.00-1.25		45
Newport	27,149	6,256	Y	Y		59	M, W, F	7.30-9.30	N		2.00-3.00	3.00	
North Providence	5,407	2,515	[4] Y	[4] Y									
Pascoag			Y	Y		55	M, W, F	7.30-9.00	N		1.00	2.00	204
Pawtucket	51,622	17,956	Y	Y		61	M, W, F	7.30-9.00	[5] Y	Y	1.33	3.00	148
Providence	224,326	76,303	Y	Y		79-169	M, T, W, Th, F	7.30- 9.30	N		2.00	4.00	
Y. M. C. A			Y			58	M, Th—T, F	7.30- 9.00	N		[2] .75		400
Warren	6,585	2,393	Y	Y		60	M, W, F	7.30- 9.00	N	Y	1.00	2.00	
Westerly	8,696	2,347	Y	Y		54	T, W, Th	7.30- 9.00	N	N	1.50	2.00	131
Woonsocket	38,125	16,539	Y	Y		60	M, T, W, Th	7.15- 9.15	N	Y	1.00	2.00	314
SOUTH CAROLINA.													
Anderson	9,654	73	Y	N		80	M, T, Th, F	7.00- 9.00	N				
Charleston	58,833	2,404	Y	N									
Columbia	26,319	446	Y	N		105	M, T, Th	7.00- 8.30	N				5
Greenwood	6,614	33	Y										
Newberry	5,028	26	Y										
Rockhill	7,216	40	Y										
Spartanburg	17,517	143	Y	N		42	M, W, F	7.30- 9.30	N				
Union	5,623	38	Y										

[1] Per month.
[2] Per hour or period.
[3] Three evenings.
[4] Pupils attend Providence evening schools.
[5] For certain pupils.

TABLE 6.—*Statistics relating to evening schools, 1914–15*—Continued.

[NOTE.—Y indicates Yes; N indicates No; ...... indicate No data.]

Cities and towns.	Census of 1910.		Evening schools.			Sessions.			Fees.	Deposits.	Salaries (per evening unless otherwise indicated).		Enrollment of foreign pupils.
	Population.	Foreign-born whites.	Public.	Public, with classes for foreigners.	Private, with classes for foreigners.	Number of sessions.	Evenings of week.	Hours.			Teachers.	Principals.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
TENNESSEE.													
Bristol	7,148	71	Y	......	......	......	......	......	......	......	......	......	......
Memphis	131,105	6,467	Y	......	......	......	......	......	......	......	......	......	......
Nashville	110,364	2,993	Y	N	......	92	M, T, W, Th	7.00- 9.00	......	......	......	......	......
TEXAS.													
Austin	29,860	2,441	Y	......	......	......	......	......	......	......	......	......	......
Galveston	36,981	6,164	Y	N	......	......	......	......	......	......	......	......	......
Houston	78,800	6,318	Y	Y	......	72	M, W, F	7.15- 9.15	N	......	$2.00	$3.00	131
San Antonio	96,614	17,407	Y	Y	......	82	M, W, F	7.15- 9.15	N	N	2.25	......	223
UTAH.													
Ogden	25,580	4,454	Y	Y	......	100	M, T, W, Th, F	7.00-10.00	N	......	[1]1.00	......	300
Provo	8,925	1,227	Y	N	......	28	Th	7.00- 9.00	N	N	......	......	......
Salt Lake City	92,777	19,035	Y	Y	......	71	......	7.00- 9.00	N	......	[2]25.00	......	56
VERMONT.													
Barre	10,734	4,106	Y	N	......	......	......	......	......	......	......	......	......
Burlington	20,468	3,938	Y	Y	......	56	M, W, Th	7.30- 9.30	Y	......	[2]4.50	......	......
Montpelier	7,856	1,449	N	N	Y	20	T, Th	7.00- 9.00	Y	N	1.00	......	10
Proctor	2,871	1,340	N	N	Y	40	M, T—Th, F	7.00- 8.00	Y	......	1.66	......	22
VIRGINIA.													
Newport News	20,205	1,650	Y	N	......	68	M, Th	7.30-9.30	N	......	[2]20.00	[2]25.00	......
Norfolk	67,452	3,564	N	N	Y	......	......	7.30-9.30	N	......	......	......	......
Portsmouth	33,190	1,115	Y	N	......	72	M, T, Th	7.00-9.00	N	......	......	......	......
Richmond	127,628	4,085	Y	Y	......	72	M, T, Th	7.30-9.30	N	N	[2]30.00	[2]35.00	42

WASHINGTON.													
Bellingham	24,298	5,152	Y										
Everett	24,814	5,472	Y	Y		37	M, W, F	7.30-9.30	N		2.40	3.50	146
North Yakima	14,082	2,027	N	N	Y								
Roslyn	3,126	1,556	Y	Y		48	T, Th, F	7.00-9.00	Y	Y	[3] 20.00	[3] 25.00	125
Seattle	237,194	60,835	Y	Y		67	M, W, F	7.15-9.15	[4] Y	Y	2.50		
Spokane	104,402	21,220	Y	Y		72	M, W, Th	7.00-9.00		Y	2.50	4.00	707
Tacoma	83,743	21,463	Y	Y		69	M, W, F	7.30-9.30	[4] Y	Y	2.50	4.00	737
Walla Walla	19,364	2,361	Y	Y		30	M, W, F	7.30-9.30	N	Y	[1] 1.50		23
WEST VIRGINIA.													
Charleston	22,996	1,014	Y										
Morgantown	9,150	1,113	Y	Y		60	M, T, Th	7.00-9.00	Y		1.50	1.75	
Parkersburg	17,842	560	Y	N		58	M, W, F	7.00-9.00		Y			
Wheeling	41,641	5,418	Y	N		60	M, W, F	7.30-9.00 7.30-9.30	N		2.00	3.00	
WISCONSIN.													
Appleton	16,773	3,257	Y	Y		48	M, W	7.30-9.30		Y	[1] 1.00		22
Beloit	15,125	2,395	Y	Y		40	T, Th	7.30-9.30	[4] Y	Y	2.00		100
Cudahy	3,691	1,684	Y	Y			M, F	7.30-9.30		Y	3.20		60
Fond du Lac	18,797	3,062	Y	Y		51	T, Th	7.30-9.30		Y	2.00-3.00		89
Janesville	13,894	1,997	Y										
Kenosha	21,371	7,642	Y	Y		48	T, Th	7.00-9.00	N	Y	[1] 1.00		487
La Crosse	30,417	6,043	Y	Y		90	T, Th	7.30-9.30	N		2.00		49
Madison	25,531	4,174	Y	Y		72	M, W, F	7.30-9.30	N		2.50-3.00	3.00	131
Manitowoc	13,027	2,534	Y	Y		44	M, Th	7.20-9.20	N	Y	2.00		18
Marshfield	5,783	1,095	Y	N		30	T, Th	7.30-9.30	Y	N	[1] 1.00	[2] 90.00	
Menasha	6,081	1,420	Y	Y		111	M, W, F	7.15-9.15	N	Y	[1] 1.00	[1] 1.25	
Menomonie	5,036	1,258	Y	Y		60	M, T, Th	7.30-9.30		Y	3.00		14
Milwaukee	373,857	111,456	Y	Y		69	M, W, F	7.00-9.15		Y	2.50	3.00-6.00	6,777
Neenah	5,734	1,313	Y										
Oshkosh	33,062	7,406	Y										
Racine	38,002	12,509	Y	Y		63	M, W, F	7.30-9.30	Y		2.00		568
Sheboygan	26,398	8,667	Y	Y		47	T, Th	7.30-9.00		Y	[1] 1.00		359
Stevens Point	8,692	1,712	Y	Y				7.30-9.30	N	Y	[1] 1.00		11
Superior	40,384	13,772	Y	Y		96	M, W, Th	7.30-9.30	N	Y	2.00	3.00	390
Two Rivers	4,850	836	Y	Y		48	M, Th	7.15-9.15	N	Y	[1] 1.00		30
Watertown	8,829	1,949	Y	Y		32	M, Th	7.15-9.15	N	Y			4
Wausau	16,560	3,918	Y	Y			T, Th	7.00-9.00	N	[4] Y	2.00		15
West Allis	6,645	2,420	Y	Y		60	M, W, F	7.15-9.15		Y	3.00	3.00	105

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[1] Per hour or period. [2] Per month. [3] Per week. [4] For certain pupils.

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1916, NO. 19

STATE HIGHER EDUCATIONAL INSTITUTIONS OF IOWA

A REPORT TO THE IOWA STATE BOARD OF EDUCATION
OF A SURVEY MADE UNDER THE DIRECTION OF
THE COMMISSIONER OF EDUCATION

WASHINGTON
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1916

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LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, August 21, 1916.

Sir: I am transmitting herewith for publication as a bulletin of the Bureau of Education the report of the survey of State higher educational institutions of Iowa, made under my direction for the Iowa State Board of Education by the following committee appointed by me for that purpose:

Dr. James R. Angell, dean of the faculties of liberal arts, literature, and science of the University of Chicago.

Dr. Kendric C. Babcock, dean of the college of arts and sciences of the University of Illinois.

Dr. Liberty H. Bailey, formerly director of the New York State College of Agriculture.

Dr. Hollis Godfrey, president of Drexel Institute, Philadelphia.

Dr. Raymond M. Hughes, president of Miami University.

Mrs. Henrietta W. Calvin, specialist in home economics, Bureau of Education.

Dr. Samuel P. Capen, specialist in higher education, Bureau of Education (chairman).

This report and the conclusions in the form of constructive recommendations were unanimously agreed upon by the members of the survey committee and approved by me.

The publication of this and reports of somewhat similar surveys made by this bureau should tend toward the establishment of more definite standards in the various fields of education and the formation of certain national policies which may gradually be adopted, always of course with necessary local modifications, throughout the country.

Respectfully submitted.

P. P. Claxton,
Commissioner.

The Secretary of the Interior.

STATE HIGHER EDUCATIONAL INSTITUTIONS OF IOWA.

INTRODUCTION.

In the latter part of February, 1915, the Iowa State Board of Education requested the assistance of the United States Bureau of Education in the preparation of a budget for the three State higher institutions under the board's control. The invitation to the Commissioner of Education, in addition to rehearsing the recent history of the Iowa State institutions and suggesting the matters on which advice was desired, stated specifically:

> That the State board of education has no desire to reopen the coordination question in the sense of combining the colleges of engineering and home economics as organized at the State University of Iowa and the Iowa State College of Agriculture and Mechanic Arts, or the abandonment of the college courses at the Iowa State Teachers College; but the Iowa State Board of Education would like to know whether it would be possible, without resorting to such radical action as mentioned above, to reduce duplications.

It was the board's expectation that the necessary examination of the institutions and study of their needs might be made during the academic year 1914–15.

The importance of the task, together with other engagements of the Commissioner of Education and his subordinates, made it seem unwise to undertake the enterprise within the period contemplated by the board. The Commissioner of Education was convinced that such an investigation should be made with due deliberation. He accordingly informed the board of his inability to assume the direction of it until the following autumn.

On May 15, 1915, a meeting of the board was held at Des Moines, which was attended by the Commissioner of Education and Dean K. C. Babcock, of the University of Illinois, special collaborator of the Bureau of Education. At this meeting formal sanction for the survey of the three State institutions was voted by the board and a memorandum furnished of the questions upon which information and counsel were especially desired. The following resolutions were passed:

> *Be it resolved*, That the Iowa State Board of Education hereby requests Hon. P. P. Claxton, Commissioner of Education, to make a survey of the institutions of higher learning under this board, said survey to be made according to the plans suggested by the commissioner, who is hereby authorized to

employ such assistance as he deems necessary, the amount of compensation for such assistants to be agreed upon by the commissioner and the board; and

Be it further resolved, That the president of the Iowa State Board of Education and the finance committee be authorized to represent the board in all matters relating to the survey; and that the commissioner be requested to make a report of said survey, to the State board of education, not later than March 1st, 1916.

In its memorandum to the commissioner, the board requested that inquiry be made into the following matters:

1. The duplication in courses in education and psychology between the State university and the college of agriculture and mechanic arts.
2. The extent to which courses in liberal arts are offered at the Iowa State College of Agriculture and Mechanic Arts.
3. The advisability of giving courses in journalism at the State college of agriculture and mechanic arts and the desirability of establishing a school of journalism, with a recommendation as to its location.
4. The status of graduate work at each of the three State institutions, with the expression of an opinion by the investigators as to the possibilities of preventing duplication in this department.
5. The feasibility of consolidating the extension work of the three State-supported institutions.
6. The adequacy of the buildings, and the economy exercised in their use, at the State university, the State college of agriculture and mechanic arts, and the State teachers college. Specifically the opinion of the investigators was requested as to whether a general library and auditorium, or a botany and geology building, should be provided at the State university within the next biennium.
7. The best avenues of expansion of the State university and the State college of agriculture and mechanic arts, with special reference to the advisability of adding new colleges or departments to meet present or future educational needs of the State. The investigators were asked especially for a recommendation concerning the establishment of a college of commerce.

The Commissioner of Education believed that such an inquiry could best be undertaken by a group of persons whose training and experience would fit them to deal with general administrative problems in higher education in a constructive way, and who as individuals might respectively bring special knowledge to bear upon the definite questions raised in the board's memorandum. He therefore appointed, with the approval of the State board of education, the following persons to act as a survey commission:

Dr. James R. Angell, dean of the faculties of liberal arts, literature, and science of the University of Chicago.

Dr. Kendric C. Babcock, dean of the college of arts and sciences of the University of Illinois.

Dr. Liberty H. Bailey, formerly director of the New York State College of Agriculture.
Mrs. Henrietta W. Calvin, specialist in home economics, Bureau of Education.
Dr. Hollis Godfrey, president of Drexel Institute, Philadelphia (consulting member).
Dr. Raymond M. Hughes, president of Miami University.
Dr. Samuel P. Capen, specialist in higher education, Bureau of Education (chairman).

The commission was organized in July. During the latter part of the summer certain of its members devoted themselves to the study of the printed material bearing upon the Iowa situation. The Bureau of Education furnished summaries of various documents and statistical compilations, which were circulated among the members of the commission.

The commission met on the 6th of October in the office of the Commissioner of Education at Washington and outlined the plan of the survey. In addition to the questions raised by the board of education in the memorandum already mentioned, it was determined to study with some care certain phases of administrative efficiency, especially those relating to the amount of teaching carried by members of the faculty, the size of classes, the standards of admission and promotion in the three institutions and their enforcement, and the machinery of general administration. Sanction for this extension of the field of the inquiry was found in the statement presented by the board to the Commissioner of Education in connection with its original invitation to him (mentioned in the first paragraph of this introduction) to undertake the survey. As essential to a proper estimate of the present status and future development of the State-supported institutions, the commission decided to consider the whole field of higher education in Iowa. The several topics to be studied were apportioned to subcommittees of the commission, the appointments to these subcommittees being based upon what was felt to be the peculiar aptitude of each member of the commission developed through previous administrative or teaching experience.

Before proceeding to study the institutions on the ground, the commission issued through the Bureau of Education detailed inquiries to the presidents, registrars, deans, and directors of the departments having to do with the questions under investigation. The material thus collected was summarized in part at the Bureau of Education and in part at the offices of the members of the commission who are not connected with the bureau.

The Bureau of Education also prepared a letter of inquiry concerning the educational needs of the State, which, through the cooperation of the State board of education, was sent to presidents of chambers of commerce, heads of granges, newspaper editors, superintendents of schools, and certain other citizens of distinction. One hundred and forty-one replies were received. The text of the letter follows:

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, October 18, 1915.

MY DEAR SIR: At the request of the Iowa State Board of Education the United States Commissioner of Education has appointed a survey commission to make a report upon the conditions and needs of the three State-supported institutions of higher education in the State of Iowa.

It would be of great assistance to the commission to learn from representative citizens and from influential organizations the opinion of the State regarding the efficiency of organization and management of these institutions, the wisdom of their educational policies, the possible avenues of waste through unnecessary duplication, and the most profitable lines for their future development. I therefore take the liberty of asking you to address to me, for the benefit of the commission, a brief statement which will cover the following points:

1. In your judgment is each of the three higher institutions occupying fully and exclusively the sphere which properly belongs to it?
2. Are there general defects in policy or management of any one of the institutions which have prevented its proper development or disturbed the balance which would prevail between three State schools founded for three distinct purposes?
3. Do you think it desirable to maintain the State institutions of higher education on a sound and generous basis, providing from time to time for their physical expansion to keep pace with the increasing complexity of higher education and with the possible growth of the State?
4. Would you suggest any new activities, directly or indirectly, for the benefit of the people of the State which any one of the institutions should take up?
5. In your opinion what occupations and industries promise to be most important to Iowa in the near future? Is there already ample provision for training in these lines; or should the State-supported higher institutions give special attention to the development of training in some of them?

The commission desires the frankest expression of opinion on these subjects and on any others that you may care to discuss. Your communication will be regarded as strictly confidential.

May I urge you to reply in the inclosed penalty envelope not later than November 1st.

Sincerely, yours,

P. P. CLAXTON, *Commissioner.*

In issuing the letter the commission had two ends in view. First, it desired to ascertain the attitude of leading citizens of the State toward the State's higher institutions, to construct for itself the atmospheric setting of these institutions. Second, it wished to secure the opinion of those citizens of Iowa best informed and best qualified to speak concerning the probable future development of the State and the new or enlarged educational facilities which this development might demand. Both of these purposes were achieved. Most of the replies were conscientiously prepared. Taken together, they have not only cast much light on the whole higher educational situation, but they have revealed in a striking way the spirit of the State. A few of the replies are truly notable documents.

The period from November 8th to November 19th was devoted by the commission to visiting the institutions. President Godfrey was represented in this part of the work by Mr. H. T. Murray, of Drexel Institute. The commission spent four days at Iowa City, two at Cedar Falls, and five at Ames. The procedure during these visits was in brief as follows:

After a preliminary view of the grounds and buildings the members of the commission separated and individually or in groups of two interviewed the principal officers of each institution, including as many heads of departments as possible. Certain of the members examined with care the educational and financial records and all documents relating to the use of buildings. At the State university and the State college of agriculture and mechanic arts it held hearings attended by the presidents, deans, and certain heads of departments in these institutions. At the State teachers college it held a hearing attended by the president and the head of the department of education, who is also the director of study-center work. A stenographic report of each of these hearings was made and a copy given to the president of the institution concerned.

On the 17th of November the commission had an audience with Gov. Clarke, discussing with him the more important features of the educational situation. Subsequently the members called upon Supt. Deyoe and obtained from him a statement of the relations between the department of public instruction and the administration of the higher institutions of the State.

On the 18th of November the commission met with the State board of education in Des Moines and discussed certain of its observations and the scope of its report. The members pointed out to the board that, in their opinion, the commission should be allowed to exceed the definite limits originally laid down and to take up in its report other matters than those mentioned in the memorandum presented to the Commissioner of Education in May. While this memorandum had served thus far as a guide for the commission's inquiries and deliberations, nevertheless other issues had constantly obtruded themselves upon the attention of the commission—issues which the members had come to believe were fundamental to the situation, and which should be taken into account, if the report were to have any value. The board was convinced by the discussion that, to render the best service, the commission should be free to treat any parts of the educational situation in Iowa that might be necessary.

In accordance with this understanding, the commission has ventured upon a general consideration of the question of duplication. It was felt that recommendations could not consistently be made regarding the prevention of duplication in certain specified lines, particularly in the field of graduate work, without account being taken, at the same time, of the whole extensive area of duplication. The effort has been to show that almost all cases of duplication are symptoms of the same organic defect, and that these symptoms can not be permanently remedied by a series of small, palliative measures, but only by action designed to remove the defect itself. Certain principles are proposed which it is believed will, if applied, achieve the desired result. The commission is desirous of having the fact distinctly understood, however, that this wider discussion is undertaken wholly on the commission's own initiative, and that the consent of the board to the embodiment of it in the report was obtained only after the commission's investigations were practically finished. This statement is made in order that the position of the board in the matter may not be misconstrued.

The commission has not attempted to go into past institutional difficulties or to investigate questions of legality. The members have considered it their duty to judge educational conditions as they found them, to determine the status of each institution as now developed, and to recommend policies and administrative readjustments which they believe to be right in principle, which have the sanction of practice in other progressive States, and which the commission thinks will solve Iowa's most vexed educational difficulties.

To restore and preserve peace between the State higher schools, to facilitate a harmonious evolution of the State's higher educational system and of each of its parts—these are the ends which the State itself seeks. They are the ends which the commission has held constantly in view. If the commission's advice seems to the board and to the people of Iowa worth adopting, and if it is found that existing laws interfere with such adoption, the remedy is to change the laws; but the commission offers no definite recommendations as to legislation.

On the 19th of November the commission disbanded in Des Moines, two of its members visiting before their return certain of the officials of privately supported higher institutions in the State and three high schools of different types. The composition of the report, to which each member contributed one or more sections, occupied the following eight weeks. A brief of the findings of fact upon which each of the sections of the report was based was sent to the officers of each of the institutions with the request that any inaccuracies of statement be corrected. The facts, therefore, upon which the final report of the commission rests have been attested by the persons best qualified to speak concerning them. For the interpretation of these facts, which is its chief business, the commission takes entire responsibility.

The commission met in Washington January 3, 4, and 5, 1916, discussed the final form of the report, and decided upon certain minor revisions.[1] The separate contributions were then edited and combined in a single document by the Bureau of Education.

It will, of course, be apparent to any student of education that the survey does not cover all matters of interest and importance relating to the management of the State higher institutions. Departmental organization, for instance, receives very limited treatment. The only phase of student life touched upon is the housing of women students. No attempt was made to estimate the quality of classroom instruction or the professional equipment and standing of members of the three faculties. Indeed, there are a score of topics which would doubtless offer profitable fields for investigation which the commission did not consider. Some of these are mentioned later (see pp. 112, 124). Several others upon which the commission gathered extensive data are not included in this report. The contents of the report, and in a general way the commission's investigations, were determined by two considerations. The first of these was Iowa's complex administrative problem, the problem of organizing the component parts of its higher educational system so that they will work cooperatively, harmoniously, without mutual interference, and with the minimum of waste for the common welfare of the State. The second was the board's memorandum, which raised certain definite questions upon which advice was desired. The commission now reports on each of these questions, although it has thought best to discuss them in a different order from that suggested by the board.

The commission takes this opportunity to record its grateful recognition of the courtesy and cordiality with which it has everywhere been met. Not only the members of the board of education and the finance committee, but also all the officials with whom it came in contact at each of the three institutions have manifested an eagerness to cooperate and a keen desire to spare it trouble or delay. The burden imposed by some of the commission's inquiries has been heavier than would probably be guessed by those not familiar with educational investigations. The principal weight of it has fallen on the recording and reporting officers, yet these officers have in every case gathered the information requested promptly and cheerfully. The frank and friendly spirit in which all three faculties have received the commission has transformed what might have been an arduous though interesting task into a delightful experience upon which every member of the commission will look back with satisfaction.

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[1] It is worth recording that the commission has never had a divided vote. Every recommendation in the report has been carried unanimously.

On February 15 and 16 the chairman and two other members of the commission met the State board of education in Des Moines and submitted a preliminary draft of the report. The purpose of this conference was to determine whether there appeared in the report any errors in statement of fact concerning those matters of which the board has special knowledge. A few minor changes in the phrasing of portions of the report were made as the result of the meeting, but no changes in the substance of the recommendations. No recommendations were added and none were eliminated.

On February 23 the report was submitted to the Commissioner of Education. As the result of a conference between him and two members of the commission on February 26 one recommendation was slightly modified.

On February 28 the chairman and two members of the commission met with the presidents of the three institutions in Chicago and put before them the same preliminary draft of the report which had been presented to the State board of education. The purpose of this conference was similar to that of the meeting in Des Moines on the 15th and 16th of the month. The commission wished to be sure that no misstatements of fact remained through inadvertence in the document. During the course of the conference the presidents were informed of the changes in phraseology adopted as the result of the earlier conference. In all cases these changes met with their approval. The presidents in turn suggested certain other modifications not affecting the structure of the report, which the commission was ready to adopt. In addition, it appeared that certain minor recommendations relating to the provisions for physical training for women at the State teachers college were based upon an erroneous conception of the actual conditions. These, together with the discussion relating to them in the body of the report, were eliminated.

On March 17, after the changes mentioned had been reported to the other members of the commission and had received their approval, the manuscript of the report was turned over to the Bureau of Education for publication as a bulletin of the bureau. A synopsis of the report was also prepared and, simultaneously with the appearance in print of the full document, was sent to the Iowa State Board of Education for publication in the daily press.

Chapter I.

HIGHER EDUCATION IN IOWA, WITH INCIDENTAL REFERENCE TO PUBLIC SECONDARY EDUCATION.

BOARDS AND STATE AUTHORITIES.

Control of public higher and secondary education in Iowa is vested in several boards and officials, whose functions are prescribed by act of legislature. These are the State board of education, created in 1909, the finance committee of the State board of education, the State superintendent of public instruction, and the State board of educational examiners. The State superintendent of public instruction is authorized by law to appoint a State inspector of normal training in high schools and private and denominational schools and State inspectors of graded and high schools. The State board of education appoints the State inspector of secondary schools, and cooperates with the institutions under its control in the appointment of a board on secondary school relations.

THE STATE BOARD OF EDUCATION.

The State board of education consists of nine members appointed by the governor for terms of six years and serving without compensation, save for a small per diem to cover the expenses of travel. It is charged with the government of the State university, the college of agriculture and mechanic arts, the teachers college, and the school for the blind, and its powers extend to the appointment of all officers and employees of these institutions and the fixing of their salaries. It directs the expenditure of all State money appropriated to the institutions, and submits biennially to the legislature estimates of appropriations needed for their future support.

FINANCE COMMITTEE OF THE STATE BOARD OF EDUCATION.

The board is assisted in its management of the State higher institutions by a finance committee of three, appointed by the board itself from outside its membership, which performs the functions of an executive committee of the board. The powers and duties of the finance committee are only vaguely defined in the act authorizing its appointment. Its members receive a salary of $3,500 a year each, and are expected to devote all their time to duties assigned them in connection with the higher institutions. They are required to visit each institution each month and familiarize themselves with its work. The secretary of the committee acts as secretary of the board.

THE INSPECTOR OF SECONDARY SCHOOLS.

Shortly after its creation in 1909, the State board of education established the office of inspector of secondary schools. This official continues under the direction of the board the practice carried on for some years previously by the university. He is charged with the duty of visiting such high schools in the State as desire to be accredited[1] by the State higher institutions, and passes upon their equipment and standards.

THE BOARD OF SECONDARY SCHOOL RELATIONS.

The inspector of secondary schools is chairman of the board on secondary-school relations, consisting, besides himself and his assistants, of a member of the faculty of each of the three State higher institutions appointed by the president of the institution and approved by the State board of education. The board on secondary-school relations considers and submits to the faculties of the three institutions recommendations on all matters respecting the standards to govern the accrediting of schools. These recommendations become operative when approved by the three faculty bodies.[2]

STATE SUPERINTENDENT OF PUBLIC INSTRUCTION.

The State superintendent of public instruction, who presides over the department of public instruction, is appointed by the governor for a term of four years and receives a salary of $4,000. This official has general supervision and control over the rural, graded, and high schools of the State and over all other State and public schools, except those under the direction of the State board of education or the State board of control.[3] Among his legally prescribed duties are the classification of the various public schools and the formulation of suitable courses of study for them. As it relates to the high schools, this classification is especially important, for on it depends the right of three types of schools to claim State or district subsidies. Children of rural sections which do not maintain high schools may attend high schools in neighboring districts, the home district paying their tuition at the rate of $3.50 per month. To collect this tuition for outside pupils, a high school must be approved by the State department of public instruction. State aid to the amount of $750 per annum is granted to high schools which maintain courses for the training of rural teachers satisfactory to the State superintendent of public instruction. The same amount is also granted to consolidated schools offering courses in agriculture, domestic science, and manual training which are approved by the State superintendent of public instruction.

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[1] An accredited school is one whose standards and equipment have been approved by the agents of a higher institution (generally the State university) and whose graduates are accepted for entrance by that institution without examination.

[2] In 1909 the State board of education appointed a committee of 15, representing the faculties of the three State higher institutions, to agree upon a common basis for the relationship between the public high schools and the State institutions. Upon recommendation of this committee, uniform entrance requirements were adopted for similar courses at all three institutions, and it was agreed that no one of the institutions should change its entrance requirements without notice to the others.

[3] This body has charge of the institutions for the defective, delinquent, and invalided.

INSPECTORS OF THE STATE DEPARTMENT OF PUBLIC INSTRUCTION.

To assist him in determining the eligibility of these three classes of schools for approval and to aid in the general work of supervision, the State superintendent of public instruction appoints, under the law, an inspector of normal training in high schools and private and denominational schools, also one and not to exceed three inspectors of graded and high schools.

STATE BOARD OF EDUCATIONAL EXAMINERS.

The State board of educational examiners controls the certification of teachers. It is composed of the State superintendent of public instruction, who acts as chairman, the president of the university, the president of the State teachers' college, and two other persons appointed by the governor for terms of four years. The acts defining the powers and functions of this board specify in some detail the procedure to be followed in the issuance of different classes of teachers' certificates. The board is authorized to accept graduation from regular collegiate courses in the State higher institutions and other institutions within and without the State judged of equal rank, as evidence that a teacher possesses the scholarship and professional fitness for a State certificate. For a first-class certificate, however, collegiate courses amounting to 14 hours in education and 6 hours in psychology are required.

SECONDARY EDUCATION IN IOWA.

The population of Iowa was 2,231,853 in 1900, and 2,221,755 in 1914. In the interval it has risen slightly and dropped again. Reports made to the Bureau of Education showed that there were 51,828 pupils enrolled in public and private high schools and in the preparatory departments connected with higher institutions in 1914. This represents a gain of approximately 18,000 in 14 years, without any gain—indeed in the face of a slight loss—in the population.

The rate of increase in secondary-school enrollment has also been substantially constant throughout the period. These facts are exhibited graphically in the accompanying diagram (diagram 1), which shows the curve of secondary-school enrollment from 1895 to 1914 applied to the curve of population. All but a small portion of this

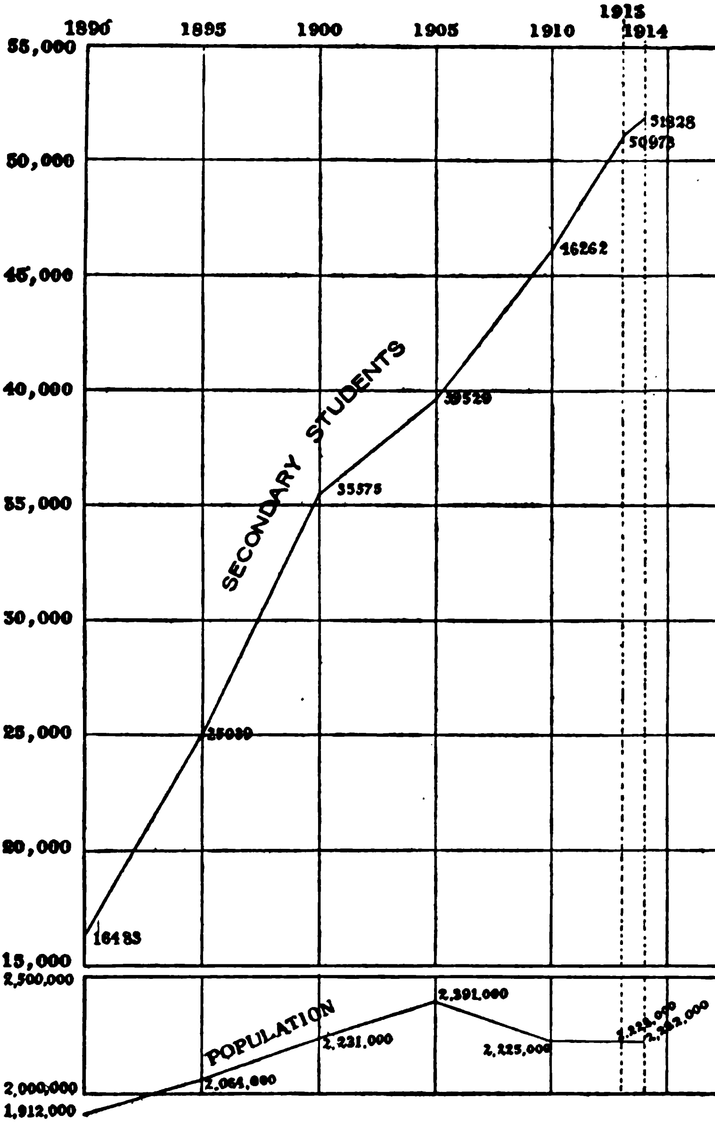

Diagram 1.—Secondary students and population.

increased enrollment has occurred in the public high schools. In 1900, for instance, 13 per cent of the secondary-school pupils were in private secondary schools or the preparatory departments of colleges; in 1914 only 11.5 per cent were in other than public secondary schools, the gain in enrollment during the 14 years being but 996.

It is also interesting to note that during the period from 1900 to 1914 there was a slight gain in the relative number of students in the graduating classes of secondary schools. In 1900, 12.9 per cent of the total secondary-school enrollment was in the senior year. In 1914 the percentage was 14.2. The curve illustrating the numerical increase in students in the graduating classes of secondary schools is shown in diagram 2.

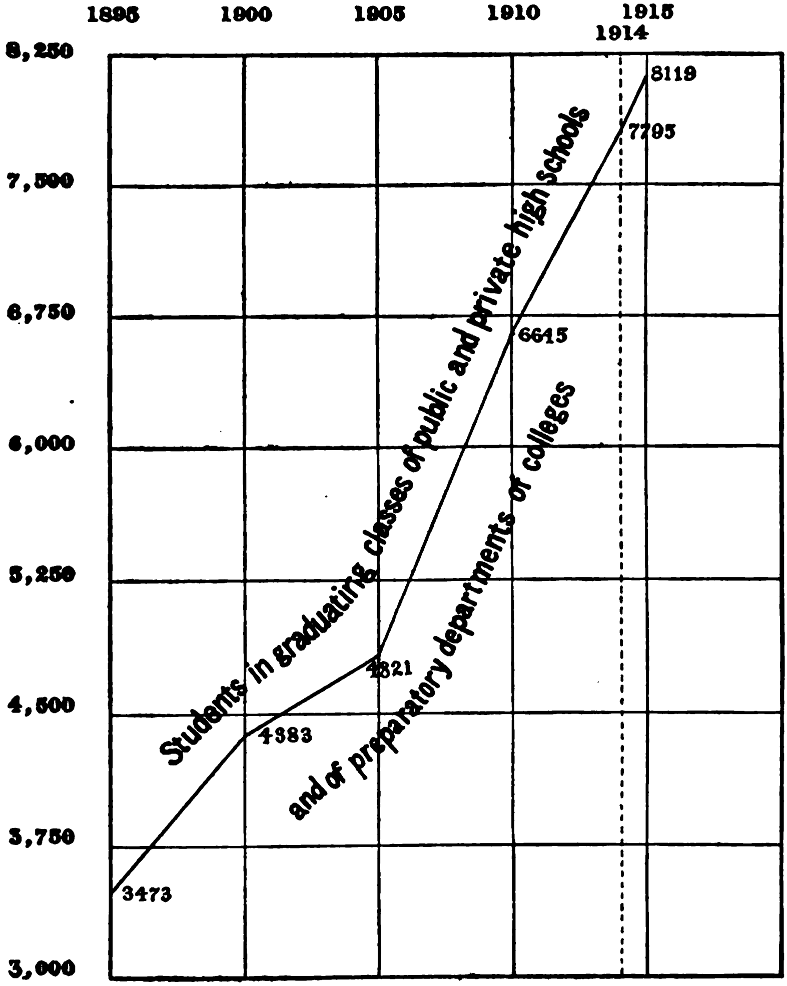

DIAGRAM 2.—Graduates of secondary schools.

The increase in public secondary education is not phenomenal.[1] Indeed the appended table (Table 1) indicates that a number of other States have outstripped Iowa in the rate of gain. Those States were selected for inclusion in the table which were known to have made considerable progress in secondary education in the past 15 years. But Iowa has an exceedingly large proportion of the total population receiving secondary education. Only one State—Utah—reports a greater percentage of the total population in secondary schools. Although the slight flattening of the curve for the past two or three years in diagram 1 indicates that the rate of growth of Iowa secondary schools is now a little slower, nevertheless, it appears that Iowa must contemplate the likelihood of having a much larger percentage of its total population in secondary schools in the future and of being called upon to spend yet greater sums for this branch of public education. Educationally advanced as the State is in comparison with many others, it still falls far short of realizing the ideal cherished not only by educators, but by most intelligent citizens, namely, the provision of adequate facilities for suitable secondary education for every child of school age.

TABLE 1.—*Percentage of change in population, school population, and secondary enrollment in certain States from 1895 to 1914.*

[Figures in italic indicate percentage of loss; other figures, percentage of gain.]

Years.	Iowa.			Georgia.			North Carolina.			Tennessee.			Illinois.		
	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.
1895-1900	8.1	6.4	34.7	13.4	13.4	7.8	10.2	10.2	12.0	8.8	10.7	8.5	9.9	9.9	31.2
1900-1905	7.2	2.8	11.1	8.6	2.0	9.3	7.3	1.0	5.6	6.3	*.7*	*15.6*	10.3	6.8	19.8
1905-1910	*7.0*	*7.0*	17.0	8.5	3.4	35.2	8.6	2.1	54.6	1.8	1.5	51.6	6.0	*3.2*	32.7
1910-1914	*.1*	*7.9*	12.3	6.4	6.8	29.3	6.0	10.4	35.7	3.2	*2.9*	22.1	6.2	4.5	17.6

Years.	Minnesota.			Michigan.			Washington.			California.			Utah.		
	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.
1895-1900	7.7	7.7	33.9	6.4	7.4	27.3	9.1	0.8	65.1	6.8	6.9	32.4	4.5	4.5	33.3
1900-1905	12.6	14.3	41.3	7.3	4.5	16.1	15.5	39.3	97.4	9.2	5.1	65.8	11.9	12.4	32.4
1905-1910	5.3	5.3	45.0	9.9	9.7	20.1	90.8	70.5	111.7	46.7	45.9	46.0	20.5	20.6	39.9
1910-1914	6.7	*1.8*	32.2	5.9	*3.5*	25.5	23.3	19.5	36.0	16.0	*.75*	47.4	11.0	*1.1*	34.7

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[1] For curves of the secondary-school enrollment in Ohio, see Appendix.

TABLE 1.—*Percentage of change in population, school population, etc.*—Contd.

Years.	Massachusetts.			New York.			Ohio.			Connecticut.			Pennsylvania.		
	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.	Population.	School population.	Secondary enrollment.
1895–1900	13.4	13.4	26.7	13.7	13.8	62.4	9.8	9.8	33.5	13.3	13.6	26.2	8.2	8.2	33.4
1900–1905	10.2	7.0	24.9	8.7	5.8	21.7	5.8	*1.5*	16.9	8.9	6.1	14.7	8.3	3.0	28.2
1905–1910	9.0	6.0	18.3	15.3	9.4	30.4	8.3	*7.6*	6.6	12.7	12.5	31.8	11.0	4.5	31.2
1910–1914	7.1	10.6	24.1	8.6	8.9	24.2	5.5	10.5	16.1	7.9	8.1	38.4	7.6	8.6	33.8

The public secondary schools, which enrolled in 1914 between 45,000 and 46,000 pupils, may, for purposes of this study, be divided into three classes: Four-year high schools accredited by the State board of education; four-year high schools not accredited by the board, but approved by the State superintendent of public instruction, and high schools approved for less than a four-year course. These are distributed numerically as follows:

Accredited high schools	351
Unaccredited, but approved, four-year high schools	115
High schools approved for less than a four-year course	135

In addition there is probably a small group of unapproved and unaccredited high schools, some of which carry less than a four-year course.[1]

It is apparent that a considerable majority of the high schools of the State are accredited by State higher institutions. The accredited schools enroll also, as might be expected, a disproportionately large number of pupils. The total enrollment in the unaccredited high schools is reported as less than 5,000.[1] About 90 per cent of the public high-school pupils are, therefore, now attending schools equipped to prepare for the best institutions of college grade. Moreover, 70 of the 115 as yet unaccredited four-year high schools are striving to qualify themselves for the accredited relation. Iowa's secondary school system, viewed as a whole, offers a channel between elementary and higher institutions remarkably free from obstruction. It has undoubtedly been one of the most effective agencies in the popularizing of higher education. Indeed, a mere statistical summary shows that the State has gone far toward the creation of a thoroughly coordinated State system of public education.

As has generally been the case throughout the United States, the public institutions which have received least material support and the smallest amount of service from educational leaders have been the schools in small rural communities, both the elementary and the high schools. The commission has had no opportunity to study elementary education in Iowa. It has been able to give but slight personal attention to secondary education, but it is credibly informed that the lower schools generally have attained the least satisfactory development of any part of the State system. Next after them are the small country high schools, many of which maintain less than a four-year course and so can not be considered as in line for recognition through accrediting by the State higher institutions. These statements are in the main borne out by the statistical returns made to the Bureau of Education, which show that in elementary education Iowa does not hold the same high relative position as in the field of secondary education.[1]

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[1] In spite of repeated requests made to the responsible officials, the commission has been unable to secure any accurate and complete numerical summary of the high-school opportunities in Iowa. It has been obliged to rely for many items on the returns made annually to the Bureau of Education.

It was undoubtedly the apparent neglect of an important group of institutions which led the department of public instruction to undertake, in 1914, the task of inspecting the smaller high schools and approving those which were maintaining sincere and honorable standards and serving the peculiar local needs of their respective communities whether these schools were eligible to the accredited relation with the State higher institutions or not. The department approves one, two, three, or four-year high schools which meet the very moderate requirements proposed by it in respect to equipment, organization, curriculum, methods of instruction, and general spirit. But it does not restrict its inspection to unaccredited schools and those ineligible for accrediting; the accredited schools and the schools in the larger places are also included in the sphere of its operations.

There are, then, two different groups of recognized public high schools in Iowa,[2] judged by two different sets of officials using two different standards and responsible to two different authorities. The tendency of the State department of public instruction will naturally be to estimate schools according as they serve local needs, which will be perhaps increasingly vocational. The tendency of the State board's inspectors will quite as naturally be to consider high schools from the point of view of higher institutions. No school can, of course, be accredited unless it is equipped to give instruction in the subjects required for entrance by the State higher institutions.[3]

In this anomalous situation the stage is set for lack of harmony, misunderstanding, and eventual conflict. The fact that these evil results have not yet appeared does not remove the danger. The commission would by no means advocate that all high schools be judged by the same criteria, or that no school be granted the encouragement of recognition by State authority unless it is equipped to prepare for college; but it considers the inspection of the same schools by different authorities offering contrary advice and holding up conflicting ideals of development to be a calamity for the smaller high schools and to exhibit a faulty governmental organization. Later in this report (see p. 125) various readjustments are suggested looking toward the coordination of the two types of inspection and standardization.

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[1] For summaries of school population, attendance, length of school year, per cent of total population undergoing elementary education, etc., see Report of the Commissioner of Education, Vol. II, p. 1 et seq., 1914.

[2] Mention is not made here especially of the high schools with normal-training classes.

[3] These entrance requirements might be called conservatively progressive, by no means as liberal as those of some neighboring State institutions, and, on the other hand, more liberal than those of many eastern universities of similar standing.

HIGHER EDUCATION IN IOWA.

Iowa is relatively well supplied with opportunities for secondary education. It is almost equally favored with facilities for higher education. The Bureau of Education has for several years listed 25 colleges and universities within the State. Forthcoming lists will add another to this number. In the report of this commission Iowa is therefore credited with 26 institutions of collegiate rank.[1] These are Buena Vista College, Central College, Central Holiness University, Coe College, Cornell College, Des Moines College, Drake University, Dubuque College, Ellsworth College, Graceland College, Grinnell College, Highland Park College, Iowa State College of Agriculture and Mechanic Arts, Iowa State Teachers College, Iowa State University, Iowa Wesleyan College, Leander Clark College, Lenox College, Luther College, Morningside College, Parsons College, Penn College, Simpson College, Tabor College, Upper Iowa University, and Wartburg College. The accompanying maps (maps Nos. 1 and 2) show their locations and the population of the State by counties according to the census figures of 1910.

The population of Iowa is evenly distributed. Not only is there little tendency toward an increase in density around the few larger centers, but there are practically no sparsely populated counties. In comparison with that of most other States, also, the population is remarkably homogeneous, intelligent, and prosperous. It is predominantly agricultural. These facts would of themselves tend to distribute the pull of higher institutions rather evenly over the State, if the institutions were located strategically so as to avail themselves of these favorable conditions. A glance at the maps, however, shows that the colleges and universities are concentrated in the eastern part of the State. Only four are located west of a line drawn north and south to pass just west of Des Moines. Indeed, 16, includ-

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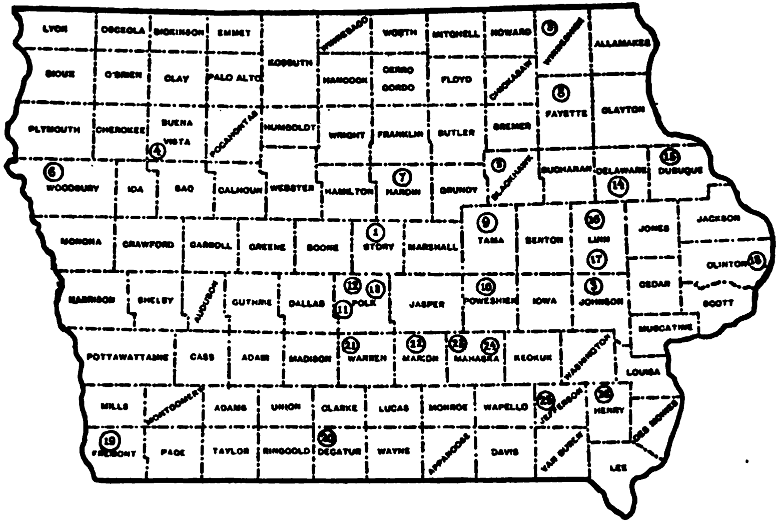
[1] To be included in the college list of the Bureau of Education an institution must be authorized to give degrees; must have definite standards of admission; must give at least two years' work of standard college grade, and must have at least 20 students in regular college status.



MAP 1.

Colleges and universities in Iowa. For population by counties, see Map 2, opposite.

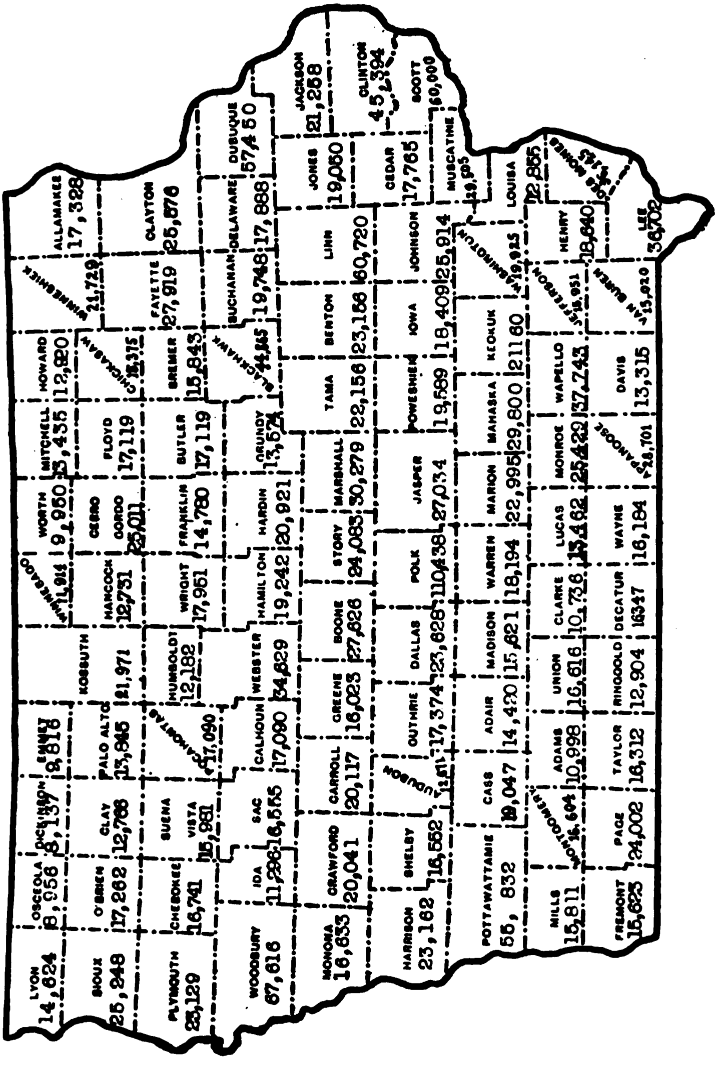
COLLEGES IN IOWA.

STATE COLLEGES.

1. Iowa State College of Agriculture and Mechanic Arts, Ames.
2. Iowa State Teachers College, Cedar Falls.
3. State University of Iowa, Iowa City.

PRIVATE COLLEGES.

4. Buena Vista College, Storm Lake.
5. Luther College, Decorah.
6. Morningside College, Sioux City.
7. Ellsworth College, Iowa Falls.
8. Upper Iowa University, Fayette.
9. Leander Clark College, Toledo.
10. Grinnell College, Grinnell.
11. Des Moines College, Des Moines.
12. Drake University, Des Moines.
13. Highland Park College, Des Moines.
14. Lenox College, Hopkinton.
15. Dubuque College, Dubuque.
16. Coe College, Cedar Rapids.
17. Cornell College, Mount Vernon.
18. Wartburg College, Clinton.
19. Tabor College, Tabor.
20. Graceland College, Lamoni.
21. Simpson College, Indianola.
22. Central University of Iowa, Pella.
23. Central Holiness University, University Park.
24. Penn College, Oskaloosa.
25. Parsons College, Fairfield.
26. Iowa Wesleyan College, Mount Pleasant.



MAP 2.

Population of Iowa by counties (for use in conjunction with Map 1, showing location of colleges and universities).

ing 4 of the largest, are in the southeastern quarter of the State. In other words, the location of Iowa colleges bears slight relation to centers of population. These facts have an important bearing, especially on teacher training, a question discussed later in this report. The somewhat serious geographical handicap which certain of the institutions suffer through the accident of their foundation is hardly offset by the excellent steam and electrical transportation facilities, which reach every corner of the State.[1]

The opportunities for higher education in these colleges and universities in courses leading to degrees may be summarized as follows:

TABLE 2.—*Number of higher institutions.*

Type of institution.	Total number of institutions.	State institutions included.
Colleges of arts and sciences	26	3
Schools of theology	1	0
Schools of law	2	1
Schools of medicine	1	1
Schools of homeopathic medicine	1	1
Schools of veterinary medicine	1	1
Schools of denistry	1	1
Schools of pharmacy	2	1
Schools or courses of civil engineering	4	2
Schools of engineering (other branches)	3	2
Schools of agriculture	1	1
Schools of music	5	2
Schools of education or courses in education preparing for State certificates	25	3

Of the 26 institutions, 14 maintain summer schools, 19 have academies (preparatory departments), and 3 others subfreshman or noncollegiate courses;[2] 2 of the latter are State institutions.

Certain interesting facts detach themselves at once from this summary: First, the majority of collegiate institutions in the State have entered the field of professional training in one branch only—education. Second, State institutions have an actual monopoly of training in the professions of medicine, dentistry, veterinary medicine, and agriculture, and a practical monopoly in engineering. Third, the only fields in which two or more State institutions are offering work in the same lines leading to a degree are arts and sciences, engineering. education, and music.

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[1] Most of the colleges are old foundations established before the population became stable.

[2] In a State as well supplied with secondary schools as Iowa there appears to be no valid educational excuse for the continued existence of so many academic departments connected with private colleges. For the majority of these institutions this means a division of resources and a probable lowering of scholastic tone. That it is unnecessary in order to get properly trained students is evidenced by the fact that several of the strongest colleges no longer maintain academies. Moreover. only four academies are accredited by the State board of education as qualified to prepare students for the State higher institutions.

With one exception,[1] all the higher institutions of the State were founded before 1895, i. e., before the period of most rapid increase in the number of pupils in secondary schools. Reference to diagram 1 (covering the period from 1890 to 1915) shows that the curve of secondary-school enrollment has the sharpest upward trend from 1895 to 1900. It is interesting to compare with these enrollment figures those of the collegiate institutions during the same period.

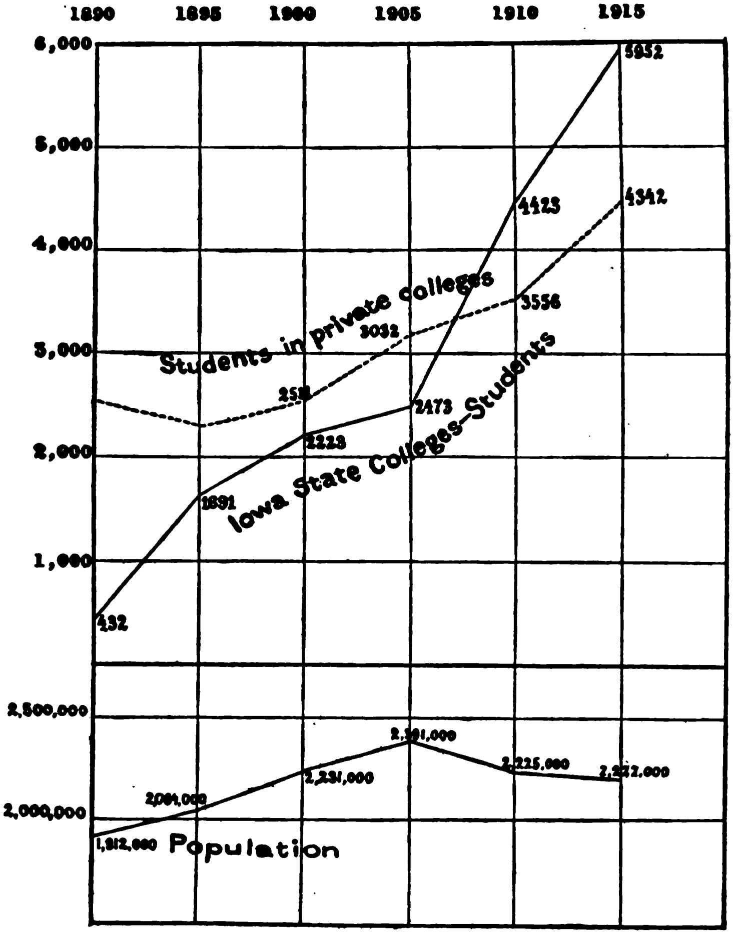

DIAGRAM 3.—Enrollment in State and private colleges, 1890–1915, in relation to population.

NOTE.—In this diagram there were several large variations which seemed to be due to errors in collecting the figures rather than to actual conditions. These points have been omitted in plotting the curve of private colleges: 1908—9,232; 1912—6,413; 1914—9,762.

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[1] Central Holiness University, founded in 1906, and enrolling 41 collegiate students in 1915.

[2] Highland Park College, which was not in the list of collegiate institutions of the Bureau of Education until the present year, is not included in summaries appearing in this chapter.

It appears that there were 2,254[2] students in the collegiate and professional courses (all preparatory and noncollegiate students having been eliminated from the returns) of all the privately-supported institutions in 1895, and 1,691 in the collegiate and professional courses of the State institutions. In 1905 the private higher institutions enrolled 3,032 and the State institutions 2,473. By 1914 the figures had grown to 4,342 for the private colleges, and 5,952 for the State colleges.[1] It appears that the most rapid upward movement

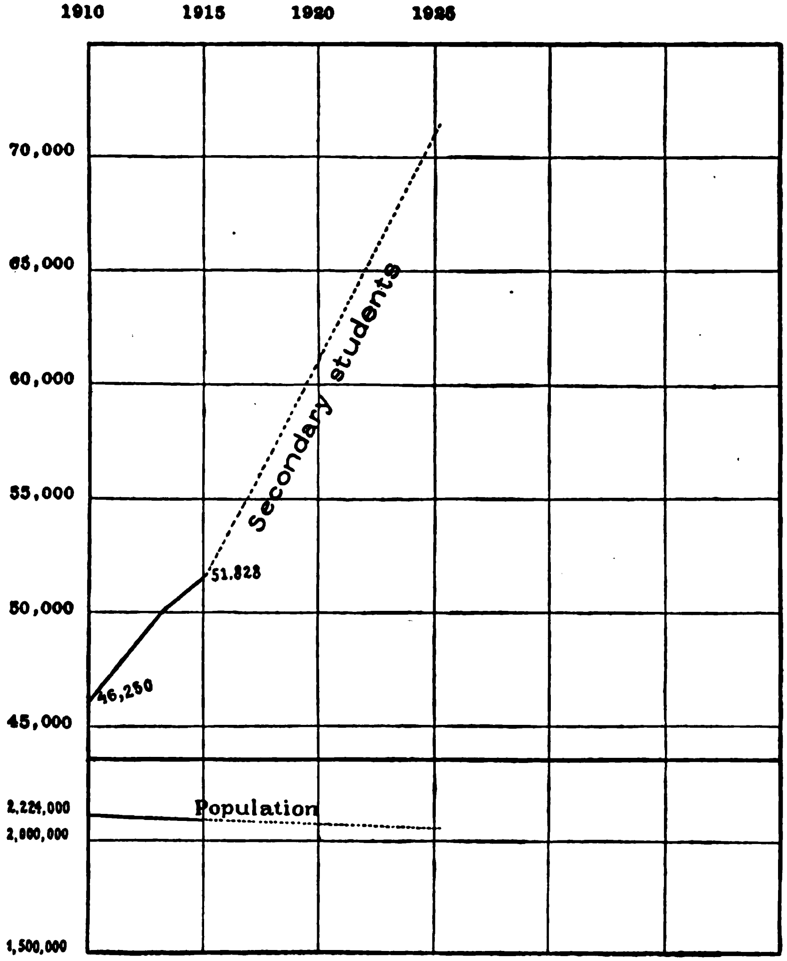

DIAGRAM 4.—Forecast of secondary school enrollment to 1925.

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[1] Summer-school students are included in these figures and reduced to approximately a 36 week basis. Figures of the State board are used for State institutions since 1910. But attention is especially called to the fact that the figures on which both these curves and those in the diagrams are based do not include the large group of special, irregular, and noncollegiate students, all of which are reckoned by the higher institutions in their total enrollments.

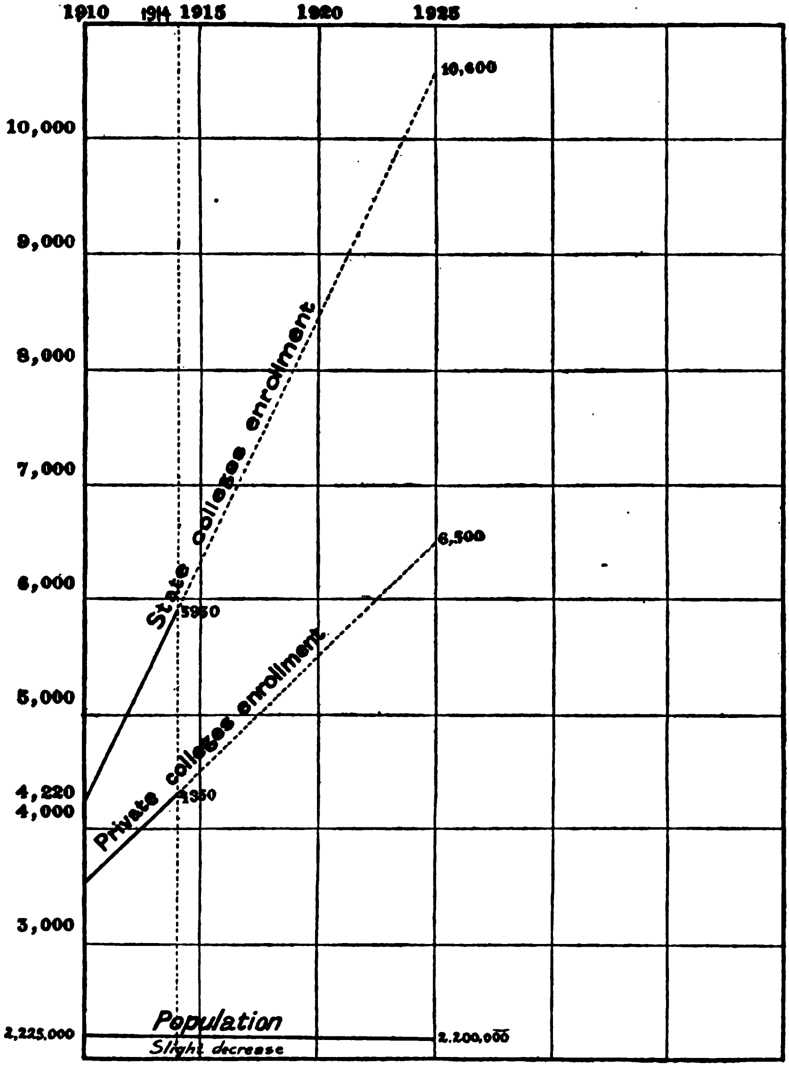

DIAGRAM 5.—Forecast of college enrollment to 1925.

For the enrollment in State colleges and private colleges since 1890, see Diagram 3, p. 27.

in both enrollment curves has taken place since 1905, the sharpest ascent being within the past five years. Both curves have kept close together, although there has been a slight relative gain on the part of the State institutions. Neither shows as yet a tendency to flatten.[1]

In view of these facts, the commission may be warranted in hazarding certain opinions as to the future tendency in the quantitative development of higher education in Iowa. First, the increase in the enrollment of Iowa colleges is likely to go on at approximately the same rate for several years. The reasons for this assumption are: (1) The expansion of collegiate enrollments generally follows a few years behind the growth of secondary-school enrollment, and Iowa's secondary schools have been growing fast for 20 years. (2) Iowa is exceedingly prosperous and places a high value on education, as is shown by the fact that its relative secondary enrollment is next to the highest in the country. (3) In spite of this, nine States and the District of Columbia have a larger percentage of the total population in higher institutions. (4) Its higher institutions through extension activities and the development of vocational courses are now making a particularly strong appeal for patronage.

The second assumption is that without an increase in the population of the State, not now foreseen, the enrollment in higher institutions is likely to become fairly stable in the course of the next two decades, probably increasing slowly each year thereafter, but no longer subject to the rapid annual increases which prove so embarrassing to many administrative officers, and which, in the case of State institutions, cause some apprehension in the minds of legislators.

Third, the privately endowed institutions will probably continue to share the field on more or less even terms with the State institutions. Each type has its distinctive contribution to make; each is strengthened by the presence of the other. But it should not be forgotten that citizens of the State to a large extent pay for both. In the case of the private institutions the taxation is indirect and frequently so distributed in time as to be an inappreciable present burden. But it is the money of the citizens of the State that in the main founds and supports these institutions.

An interesting revelation of what the State may reasonably expect in the way of educational development is found by continuing upward for the next 10 years the curves of secondary and college enrollment. According to this forecast the enrollment for 1925 would be approximately 68,000 in secondary schools, 9,900 in State higher institutions, and 6,500 in private colleges (diagrams 4 and 5).

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[1] Interesting for comparison are similar enrollment curves for Ohio. See Appendix.

Of course, precisely the conditions indicated by these imaginary curves, especially the relative gain of higher over secondary institutions, may not occur, but undoubtedly the tendencies may be thus indicated. The inevitable conclusion is that, if it wishes to maintain its enviable educational position among the States, Iowa must prepare to spend increased sums of public money for higher education for some years to come.

The present relative positions of the privately supported and the State-supported higher institutions may be made clearer if each group is considered separately for a moment.

PRIVATELY SUPPORTED COLLEGIATE INSTITUTIONS.

The great majority of privately supported colleges of Iowa were founded and are still maintained by religious denominations. Their denominational affiliations, together with their total collegiate enrollments (excluding summer schools) for the year 1914–15, may be summarized as follows:

Five Methodist	1, 350
Three Presbyterian	212
Two Baptist	288
Two Lutheran	168
One Roman Catholic	[1]157
One Latter Day Saints	24
One Friends	166
One Congregationalist	[1]19
One United Brethren	77
One interdenominational	41
Five nonsectarian	1, 920

The nonsectarian group contains, with one exception, the three largest institutions.

As has been shown, these privately supported institutions have thus far practically confined themselves to the field of liberal education. They have established courses for the training of high-school teachers, but these courses, while semiprofessional in character and designed to fit for a calling commonly rated as a profession, are for the most part neither so advanced nor so extensive as to constitute a serious excursion into the field of scientific professional and technical education. Indeed, in Iowa, as in most other States, requirements for the high-school teacher's certificate do not demand professional training in the generally accepted sense of the term. The clientele of the privately supported colleges is therefore in the main made up of boys and girls seeking a college education of a liberal or general nature.[2]

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[1] Figures of 1913–14.

[2] This statement applies only in part to Highland Park College and Drake University.

College education in institutions strongly denominational in tone, or at least predominantly religious in atmosphere, and of a comparatively small size, is securely entrenched in the regard of large groups of parents. The appeal of such institutions is often stronger than that of State colleges which may possess superior scholarly resources and equipment. The commission does not attempt to weigh the relative advantages of liberal training in the two types of institutions. It merely notes the fact. The patronage of the private college is affected in increasing measure by certain other considerations, however.

The first of these considerations is the ability of the institutions to enlarge their resources. No college can now be successfully run on fees alone. Higher education is becoming more expensive all the time. Appliances are now necessary which were not invented a generation ago. Libraries must be renewed and increased. Salaries are slowly but steadily advancing. To be assured of permanent existence and the power to draw students, a college must possess some endowment. Numerous agencies which study colleges have placed the minimum of productive endowment which an institution must have to insure permanency and efficiency at $200,000.[1] In the near future even this amount will probably be insufficient. Of the privately supported colleges of Iowa, only 10 have endowment funds exceeding this minimum figure; 4 have no endowment at all. The endowments of the others range from $25,000 to $165,000. It is reasonable to expect that some of the institutions without endowment or with less than $200,000 may find it advantageous to consolidate with others, to become junior colleges, or possibly to devote themselves to less expensive grades of educational work.[2]

The patronage of all but the strongest and best-equipped private colleges, or of those which serve a peculiarly cohesive sect, has been found to be sharply limited also by geographical considerations. Young people are prone to attend a college located in their own State. Moreover, most colleges draw the majority of their students from within a radius of 50 miles. Few institutions obtain any considerable percentage of their enrollments from outside a circle with a radius of 100 miles.[3] Maps prepared by the officers of the Iowa colleges furnish confirmation of this well-recognized truth.[4]

The third factor affecting the enrollment in private colleges is the keen competition for students among the colleges themselves. In the majority of the thickly settled parts of the country—and doubtless in Iowa—the same area is canvassed annually by many institutions. What are thought to be the chief attractions of each are diligently presented to prospective students. The colleges possessing the largest resources and exhibiting the most dynamic institutional life tend inevitably to draw more and more students and so to win an advantage, at least in point of numbers, over their less fortunate or less skillful rivals. In some quarters of the United States inter-institutional competition has already forced a few weaker institutions out of existence or has led to consolidations. Similar results may in course of time occur in Iowa.

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[1] Exception is made of Roman Catholic institutions, whose teachers serve without salary.

[2] Graceland College has already become a junior college.

[3] See General Education Board report 1902–1914, pp. 119 et seq.

[4] For these maps see Appendix, p. 211.

The relations of Iowa private colleges to the secondary schools of the State are not in all cases as clearly defined as are those of the State higher institutions to the same schools. Nineteen colleges belong to the Iowa College Association, members of which agree to admit on certificate graduates of only those secondary schools within the State that are accredited by the State board of education. Six of these announce that they admit on certificate the graduates of schools accredited by the State board of education or by the North Central Association of Colleges and Secondary Schools. The other 13 announce that they admit graduates of accredited schools without explaining the term. Indeed, the catalogues of several of these institutions treat the subject of admission by certificate with less definiteness than might be wished. It is assumed, however, that all members of the Iowa College Association have the same standards of admission as the State institutions. The remaining four colleges are somewhat vague in their statements on this point.

The general impression gained from a study of the catalogues of the private colleges of Iowa is that there are at least two standards, of which the relations of the colleges to the secondary schools may serve as the indices. One, the higher, is the standard set by the State institutions and scrupulously observed by some of the private colleges. The other is something less severe than this.

STATE-SUPPORTED INSTITUTIONS.

A few general statements concerning the State-supported institutions, treated as a group by themselves, should be juxtaposed to this discussion of private colleges. The accompanying maps show the distribution of students of the State institutions as to residence among the counties of the State.[1] It is evident that the drawing power of all three State institutions is exerted more evenly over the whole State than is that of any private college. The figures also show that these institutions, as well as the private colleges, attract relatively larger numbers from the territory in their immediate vicinity.

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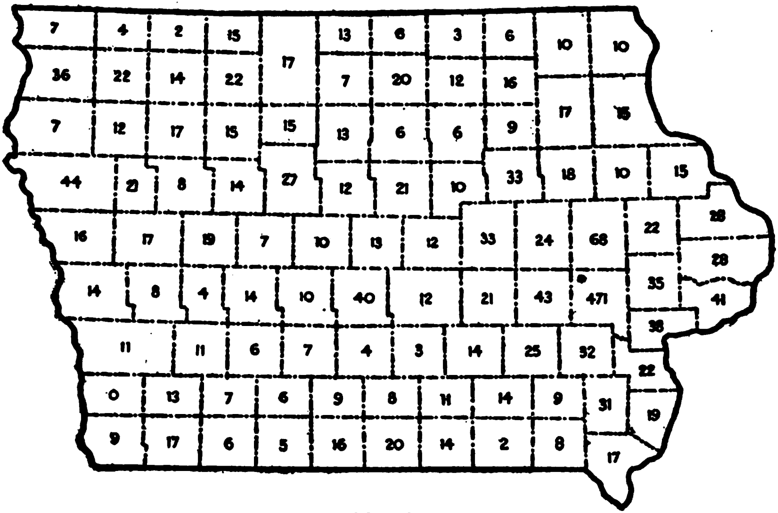
[1] The enrollment maps of the State College of Agriculture and Mechanic Arts and the State Teachers College include also the students in other collegiate courses.

Detailed studies of the amounts of money spent for the State higher institutions appear in later sections of this report. At this point it suffices to note two facts.

The first relates to the sources of income of the State as against the private institutions. For increases in their permanent incomes private colleges are dependent wholly upon the variable generosity of individual benefactors. That any considerable increase will come can not—except under the operation of a kind of law of probability which appears providentially to govern the affairs of colleges—be counted upon with certainty in advance. State institutions, on the other hand, grow rich in material support with the growth in wealth or population, or both, of the States that maintain them. The appropriations for State higher education are everywhere greater every year. State legislators as a rule are not only willing to pay larger amounts for higher education at each recurring session, but they do not hesitate to appropriate constantly larger percentages of the State's total funds. It is only necessary that the officers in charge of State institutions make a convincing showing that the money is needed and that it is being advantageously spent. As yet the probable limits of State generosity in this direction can not be guessed. For all practical present purposes, therefore, State institutions have an unlimited source of support, even if the source does prove itself at times hard to tap. If this is true in general, it is especially true

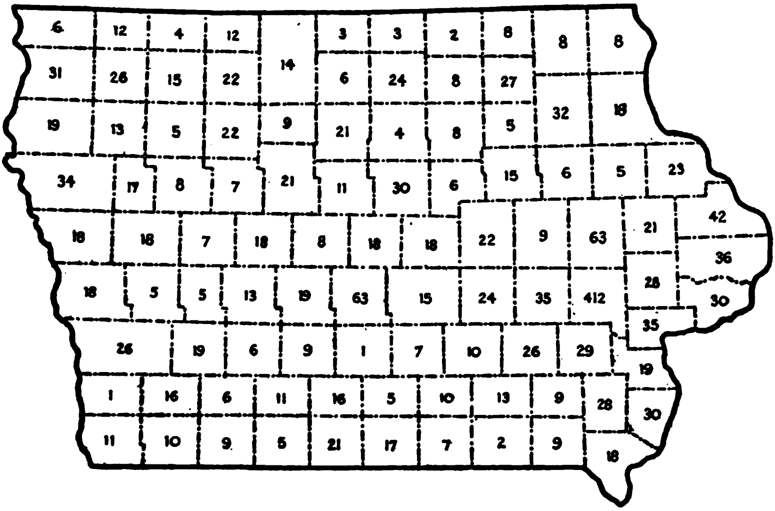


MAP 8.

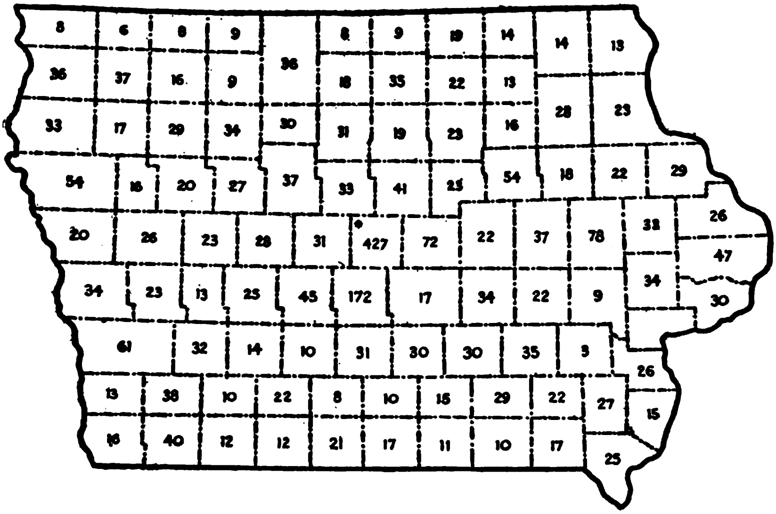
Iowa State University. Enrollment by counties, 1912–13.

Students from outside of State: Illinois, 32; Kansas, 10; Minnesota, 34; Missouri, 16; Nebraska, 12; North Dakota, 10; South Dakota, 27; other States, 49; foreign countries, 27. Total, 217.

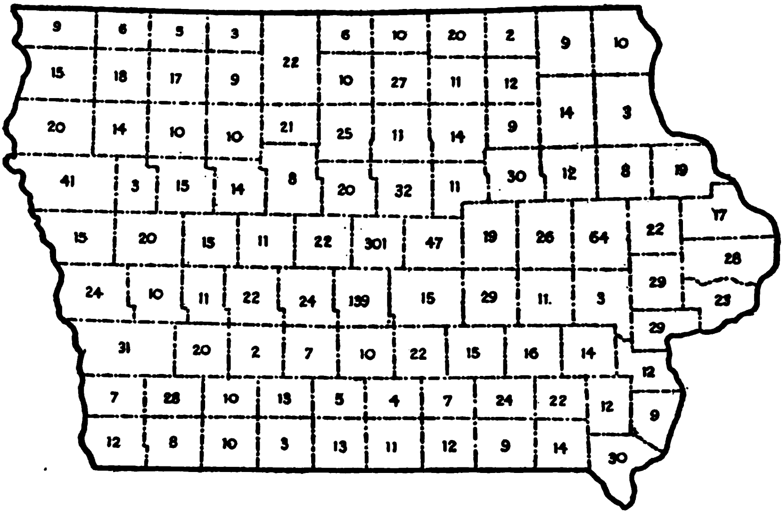
Total students in the university, 2,255.



MAP 4.
Iowa State University. Enrollment by counties, 1914–15. (First semester.)

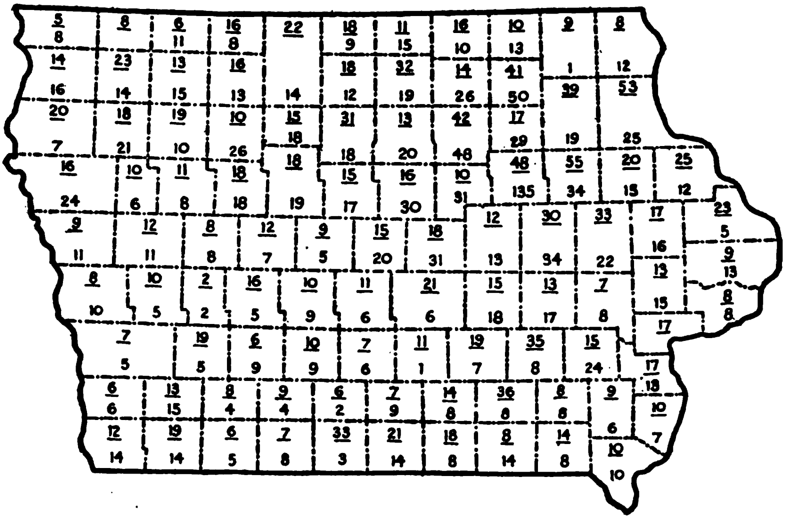


MAP 5.
Iowa State College of Agriculture and Mechanic Arts. Enrollment by counties, 1913–14. From other States: Washington, 2; Oregon, 3; California, 13; South Dakota, 26; Minnesota, 60; Nebraska, 51; Kansas, 9; Wisconsin, 10; Illinois, 79; Missouri, 16; Indiana, 17; Kentucky, 11; Ohio, 14; New York, 10; Pennsylvania, 18; other States, 59; foreign countries, 25. Total, 3,458.



MAP 6.

Iowa State College of Agriculture and Mechanic Arts. Enrollment by counties, 1914–15. Total collegiate enrollment, 2,319.



MAP 7.

Iowa State Teachers' College, 1913–14. Enrollment by counties. Underlined figures are for the summer session, 1914. Total summer enrollment (not including 289 students who re-enrolled for the fall, winter, and spring terms of 1914–15), 1,733. Other figures represent regular enrollments, 1914–15; total, 1,769. Total students in all terms for the year, 3,502. The figures for Blackhawk County do not include Cedar Falls city, with 118 in the regular course and 32 in the summer session, nor the Fourth Ward, with 117 in the regular sessions and 38 in the summer course.

From other States: Regular course, 97; summer, 46; from foreign countries, 4.

of Iowa. The State has shown itself unusually generous toward its State institutions. It is rich and growing richer. The commission has also been informed by many representatives of public opinion that there is no desire on the part of the State to curtail the appropriations required by the State institutions, provided only there is no remediable waste in institutional expenditures.

The other fact worth noting here is the actual increase in State appropriations for higher education. Diagrams printed in the Appendix show curves illustrating for Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Montana, Ohio, Oregon, Texas, Washington, and Wisconsin the increases in total State funds appropriated and the increases in the appropriations for State higher institutions.[1] The conditions here shown may be regarded as typical for the prosperous States of the country. The commission points out later in the report that Iowa may probably save some money in the conduct of its institutions, and consequently make a better comparative showing, without adopting a niggardly policy.

The entrance requirements of the State higher institutions are uniform. (See p. 16.) They compare favorably as to quality and quantity of secondary work demanded with those imposed elsewhere in the country by institutions of the highest standing. Moreover, the investigations of the commission indicate that they are in all three institutions conscientiously enforced.

It is believed that this brief presentation of the current conditions of higher education in Iowa will reveal the fact that the State institutions enjoy certain great advantages which private colleges lack and that they are burdened with corresponding responsibilities for leadership and the establishment of standards. The suggestion is also made and will be amplified later that there are certain organic defects in the administrative machinery whereby they are controlled, defects that must hamper their legitimate and harmonious development and that call for immediate remedy. Iowa has a single State university system or a single higher educational enterprise. (Except to avoid possible legal complications, it is not important what term is used to characterize it. Its nature is not altered by the use of any term.) This enterprise is divided into three parts and operated from three centers, but in its general purposes, its area of patronage, its support and its responsibilities, it is a unit. That the State has appreciated this fundamental unity and has desired to promote it is evidenced by the fact that it has placed all three institutions under the control of a single board. Iowa's greatest educational task is to transform this, as yet, almost wholly external and mechanical unity into a real unity of aim supported by mutual friendly cooperation.

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[1] See Appendix, p. 200.

Chapter II.

EXPENDITURES OF IOWA STATE INSTITUTIONS OF HIGHER EDUCATION.

The State board originally sought the assistance of the Commissioner of Education in the preparation of a budget for the next biennium.[1] The commission has interpreted this fact as a mandate to hold the question of costs continually in mind. While, as has already been implied and will be pointed out in detail later, the commission does not regard the fiscal aspects of the problem confronting the board as the most perplexing, nevertheless, the obligation laid upon the board to conduct the institutions under its control with all reasonable economy has been fully appreciated in the inquiry. It is realized that the fiscal test is the ready popular test which will always be applied as an estimate of the success of the board's stewardship. As a means of orientation, therefore, in the study of the three State institutions of higher education, specific discussion begins with an analysis of the expenditures of the institutions for the past two academic years.

The expenditures of different institutions of higher learning differ in many particulars. The forms in which these expenditures are reported differ still more. The commission has made an endeavor to summarize the expenditures of the three State higher institutions of Iowa in a form that would give a somewhat comprehensive and suggestive view of them. As the survey is chiefly concerned with various phases of the educational work of the institutions, the total expenditures for the year are first divided into two main groups: *Educational expenditures* and *extension and service expenditures.* The *educational expenditures* are then divided into three separate categories: *Construction and land*, *special and rotating funds*, and *operating expenditures.*

The category *construction and land* includes expenditures for direct additions to the plant to provide for growth in enrollment, together with outlays for the ordinary furniture of new buildings. *Special and rotating funds* include expenditures from prize funds, boarding and rooming departments, and special funds available only for indicated purposes apart from instruction. These two classes of expenditures are in a certain sense entirely independent of the cost of the operating of the educational plant.

The category *operating expenditures* includes all expenses for the annual maintenance of the institution aside from dormitories and boarding departments. It is further analyzed into *instruction*, *edu-*

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[1] See introduction, p. 7.

cational equipment and supplies, and *general operating expenses.* The distribution of the expenditures of the institutions may be arranged as follows:

- Total expenditures.
  - Educational..
    - Construction and land.
    - Special and rotating funds.
    - Operating expenditures...
      - Instruction.
      - Educational equipment and supplies.
      - General operating expenses.
  - Extension and service.

Of the subdivisions under *operating expenditures*, the first—*instruction*—includes the salaries of the deans, but not those of the president, other purely administrative officers, and librarians. The second, *educational equipment and supplies*, includes, in addition to all funds expended for departmental purposes under faculty control, also the expenditures for books and library supplies. The third, *general operating expenses*, comprises what might be classed as the overhead expenses of the institution, including the salaries of administrative officers, janitors, etc. These expenditures are essential to the main work of instruction, but have no direct relation to it.

From a business point of view, part of the expenditures under the second and third subdivisions of the preceding paragraph might be considered capital account outlays. In a college or university, however, they are rather annual expenses, necessary to keep the institution abreast of the times. They never stop. For example, $1,000 spent for books can certainly be charged to capital account, as it definitely increases the property of the institution. On the other hand, no matter how much may be spent for books in any one year, more money is required each year thereafter in ever-increasing amounts to meet the new demands of scholarship and the expansion of the field of knowledge. So, in this distribution, all expenses which may be looked forward to by the administration as necessary annual expenses are classed under *operating expenditures.*

In determining the average cost per student, the average number of students in attendance during the college year September to June is taken. It is to be noted that there is a distinction between the enrollment as ordinarily stated in a catalogue and the figures here used. The usual catalogue statement of enrollment includes all students who have attended the institution during any part of the year of 12 months. Often the summer enrollment is large. Generally the number of students in actual attendance rises from the opening of college in September for about two weeks to a maximum, and then declines because of withdrawals until the close of the term. The second term or semester usually opens with increased numbers, again reaching a maximum shortly after the opening day, and then gradually declining until the close of the year. The commsision is of the opinion that an average of the largest attendance in the two semesters gives the best average attendance available. This point may be illustrated with figures for the State college, 1914–15:

Catalogue enrollment	3, 629
Attendance Oct. 1, 1914	2, 522
Attendance Feb. 15, 1915	2, 467
Average attendance	2, 495

Attention is called to the following table, showing the per capita cost of the three institutions for 1913–14 and 1914–15:

TABLE 3.—*Per capita cost of three institutions in 1913–14 and 1914–15.*

Items of expenditure.	State university.	State college.	Teachers college.
In 1913–14.			
Instruction	$155.00	$134.00	$93.50
Educational equipment and supplies	41.50	63.50	17.00
General operating expenses	78.50	72.50	57.50
Total	275.00	270.00	168.00
In 1914–15.			
Instruction	160.00	141.00	97.50
Educational equipment and supplies	42.50	69.00	14.00
General operating expenses	72.00	61.00	58.50
Total	274.50	271.00	170.00

The items used in these computations comprise the total cash outlay per student under the general head of *operating expenditures*, except that the cost of instruction for the summer session has been omitted.[1] In other words, for the purposes of this table the *operating expenditures* taken are made up of the sum of the total *educational supplies and equipment*, the total *general operating expenses*, and the *cost of instruction* minus the expenditures for the summer term. Moreover, no interest on investment is included. The *average attendance*, determined in the way described above and not the enrollment, has been taken as the divisor to obtain the per capita cost. The method is further exhibited in the summary tables on pages 42 to 47:[2]

The commission points out that each student costs the institution from $170 to $275 a year. A small part of this expense is met by the tuition and fees paid by the student, but it is not far from the truth to say that each student in actual attendance for the college year costs $250. With approximately 7,000 students enrolled in 1915–16, this amounts to about $1,750,000 in operating expenses for the college year.

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[1] It should be noted that, while the figures appearing in the three columns are comparable with each other, they are not necessarily comparable with figures for per capita cost reported by any other institution.

[2] For detail tables from which these summaries have been compiled see Appendix, pp. 184–193.

While this is a large expenditure, it is a most wise one, if the students served are earnest and capable and improve to the utmost the advantages afforded them. Indeed, every student enrolled accepts a trust and is under obligations to justify the outlay of public funds made in his behalf. But the officials in charge of the institutions can not fail to bear in mind the fact that each student carries a very definite cost to the State, not only for operating expenses, but also, as will be shown later, for buildings. The annual rate of increase of student registration is already large and will under natural conditions grow larger, as it should. Until the State is ready to care properly for the students now in attendance upon its higher institutions the wisdom of certain forms of competitive advertising at present in vogue is perhaps problematic. The time when the State college and the State university were unknown to the people is past. They need only to make formal announcement of their offerings and give reasonable publicity to their work to secure as rapid increases in their respective enrollments as can be adequately cared for. Possibly the board should also consider in this connection the advisability of discontinuing subcollegiate work as the number of collegiate students increases; but this question is discussed more fully in another place. (See p. 88.)

In conclusion it may be stated that the present cost per student is low rather than high. It should be increased rather than decreased. In fact, a growth in numbers without a corresponding growth in support will result in weakening the institutions.

Summary Table of Expenditures, University of Iowa, 1913–14.

- The University of Iowa. Total expenditures 1913–14. $944,058.75.
  - Educational. $933,759.86.
    - Construction........ $212,766.33
    - Special funds....... 82,275.94
    - Operating expenses. 638,717.59
      - Educational equipment and supplies.. $95,406.15
      - Instruction........... 364,413.08
        - Instruction, college year............. $354,764.73
        - Instruction, summer term.............. 9,648.35
      - General operating expenses............ 178,898.36
  - Extension and service. $10,298.89
    - Epidemiologist....... 3,276.98
    - University extension.. 7,021.91

Per capita cost of 2,290 students, September–June, 1913–14. Operating expenses exclusive of summer term, $275.

	Total.	Per capita.	
Instruction...........	$354,764.73	$155.00	$155.00
Educational equipment and supplies..	95,406.15	41.50	120.00
General operating expenses...............	178,898.36	78.50	
	629,069.24	275.00	

Enrollment:

First semester..........	2,345
Second semester........	2,235
Total.................	4,580
Average..............	2,290

Summary Table of Expenditures, University of Iowa, 1914–15.

The University of Iowa. Total expenditures 1914-15. $1,017,806.72.

- Educational. $994,471.19.
  - Construction........ $238,132.28
  - Special funds........ 97,725.57
  - Operating expenses. 658,613.34
    - Educational equipment and supplies. $100,532.91
    - Instruction.......... 388,233.74
      - Instruction, college year.............. $377,815.50
      - Instruction, summer term.............. 10,418.24
    - General operating expenses.......... 169,846.69
- Extension and service. $23,334.53.
  - Epidemiologist...... 5,904.03
  - University extension. 17,430.50

Per capita cost of 2,360 students, September-June, 1914-15. Operating expenses exclusive of summer term, $274.50.

	Total.	Per capita.	
Instruction............	$377,815.50	$160.00	$160.00
Educational equipment and supplies...	100,532.91	42.50	114.50
General operating expenses..............	169,846.69	72.00	
	648,195.10	274.50	

Enrollment:

First semester..........	2,416
Second semester........	2,303
Total.................	4,719
Average..............	2,360

Summary Table of Expenditures, Iowa State College of Agriculture and Mechanic Arts, 1913–14.

Iowa State College of Agriculture and Mechanic Arts. Total expenditures, 1913-14. $1,461,684.25.	Educational. $1,037,833.47.	Construction....... $317,978.63		
		Special funds....... 95,846.55		
		Operating expenses. 624,008.29	Educational equipment and supplies. $144,974.02	
			Instruction......... 313,158.01	Instruction, college year............... $305,804.07
				Instruction, summer term.............. 7,353.94
			General operating expenses......... 165,876.26	
	Extension and industrial service. $424,850.78.	Construction....... 42,874.10		
		Special funds....... 142,444.59		
		Operating expenses. 239,532.09	Experimental work 145,544.09	
			Extension work.... 93,988.00	

		Total.	Per capita.	
Per capita cost for 2,279 students, September-June, 1913-14. Operating expenses, exclusive of summer term, $270.	Instruction...........	$305,804.07	$134.00	$134.00
	Educational equipment and supplies..	144,974.02	63.50	136.00
	General operating expenses..............	165,876.26	72.50	
		616,654.35	270.00	

Enrollment:

First semester.........	2,292
Second semester.......	2,267
Total.................	4,559
Average.............	2,270

Summary Table of Expenditures, Iowa State College of Agriculture and the Mechanic Arts, 1914–15.

Iowa State College of Agriculture and Mechanic Arts. Total expenditures, 1914-15. $1,599,430.41.	Educational. $1,150,081.67.	Construction	$338,336.52				
		Special funds	124,600.42				
		Operating expenses	687,144.73	Educational equipment and supplies	$172,218.11		
				Instruction	362,291.87	Instruction, college year	$352,293.82
						Instruction, summer term	9,998.05
				General operating expenses	152,634.75		
	Extension and industrial service. $449,348.79.	Construction and land	14,778.21				
		Special funds	140,341.71				
		Operating expenses	294,228.82	Experimental work	163,883.32		
				Extension work	130,345.50		

		Total.	Per capita.	
Per capita cost for 2,495 students, September-June, 1914-15. Operating expenses, exclusive of summer term, $271.	Instruction	$352,293.82	$141.00	$141.00
	Educational equipment and supplies	172,218.11	69.00	130.00
	General operating expenses	152,634.75	61.00	
		677,146.68	271.00	

Enrollment:

First semester	2,522
Second semester	2,467
Total	4,989
Average	2,495

Summary Table of Expenditures, Iowa State Teachers College, 1913–14.

- Iowa State Teachers College. Total expenditures, 1913–14. $298,808.65
  - Educational. $298,488.65
    - Construction...... $58,885.81
    - Special funds..... 1,649.33
    - Operating expenses. 237,953.51
      - Educational equipment and supplies. $22,707.06
      - Instruction....... 139,984.63
        - Instruction college year. $122,049.64
        - Instruction summer term. 17,934.99
      - General operating expenses. 75,261.82
  - Extension study center $320.00

Per capita cost for 1,309 students, September-June, 1913-14. Operating expenses, exclusive of summer term, $168.

	Total.	Per capita.
Instruction...........	$122,049.64	$93.50
Educational equipment and supplies.	22,707.06	17.00
General operating expenses.	75,261.82	57.50
	220,018.52	168.00

Enrollment:

First term............	1,297
Second term..........	1,384
Third term...........	1,245
Total...............	3,926
Average.............	1,309

Summary Table of Expenditures, Iowa State Teachers College, 1914–15.

Iowa State Teachers College. Total expenditures, 1914–15. $357,598.33.	Educational. $349,495.82.	Construction.....	$86,013.52				
		Special funds.....	1,779.93	Educational equipment and supplies.	$19,745.08		
		Operating expenses.	261,702.37	Instruction.......	158,581.60	Instruction, college year.	$137,886.75
						Instruction summer term.	20,094.85
				General operating expenses.	83,375.69		
	Extension study center $8,102.51.						

Per capita cost for 1,419 students, September–June, 1914–15. Operating expenses, exclusive of summer term, $170.		Total.	Per capita.
	Instruction...........	$137,886.75	$97.50
	Educational equipment and supplies.	19,745.08	14.00
	General operating expenses.	83,375.69	58.50
		241,007.52	170.00

Enrollment:

First term............	1,406
Second term..........	1,485
Third term...........	1,366
Total...............	4,257
Average.............	1,419

Chapter III.

DUPLICATION AND THE PRINCIPLE OF MAJOR LINES.

It has been stated that the commission, early in the course of its investigations, became convinced that, if it were to do justice to the problems presented to its consideration, it must take account of certain larger issues which have had a determining influence in shaping the development of educational administration in Iowa and which have in a great measure given rise to the questions on which the State board now seeks advice. The commission is persuaded that no permanent solution of the educational difficulties which the State has experienced can be hoped for until these issues have been resolutely faced and definitely settled on the basis of the highest good of the State and its coming generations of students, whatever the cost to personal or institutional ambitions. It confidently believes that a settlement on this basis is possible and that the necessary procedure is plain. It is far more important that such a settlement should be brought about than that the State should save a few thousands of dollars through economies in institutional management. Without recapitulating the history of State higher education in Iowa, the commission proposes in the present chapter to discuss the existing status of the three State higher educational institutions, especially as regards the fundamental question of duplication, and to point out a remedy which it conceives to be valid for the incoherency in the relationships between them.

The primary difficulty, so far as the three higher institutions are concerned, lies in the lack of clear definitions of scope, particularly as between two of them. In the beginning of State plans of education a State university was projected as the crown and completion of the system. At that time the differentiation of education into great spheres or divisions of subject matter was not foreseen in any of the States, and it was natural and perhaps inevitable that inharmony should arise with the founding of other institutions to care for the constantly enlarging demands. While theoretically and historically a State university may represent the culmination of the State system, practically the fields of all State institutions are determined by the successive acts of the legislatures.

There is marked tendency in all States to bring about a parity between the institutions of higher education, expressed in like or equivalent entrance requirements, in comparable educational standards and in equality of standing on the part of the staffs. In some States the effort in higher education is concentrated in one institution, known as the State university, in which all subjects are at once on a parity. In those cases in which the effort is distributed in separate institutions the different subjects may, nevertheless, be on a parity, and the institutions may be conceived as one university separated into its parts, or the different parts may be recognized in fact, if not in name, as separate universities, each covering the field assigned to it. To one part in the State organism of higher education may be assigned all the liberal arts, the so-called learned professions and their adjuncts; to another may be assigned the applied sciences, mechanic arts and engineering, agriculture; to another the training of teachers. It remains for the State to define the fields of each in consonance, so far as necessary, with Federal statutes, and no one of the parts or institutions may assume the entire field to itself. This much must be granted before there can be a real harmony in any State.

Nor can the intention in the different parts or institutions be longer held to give one part superior standing or merit or to separate it into an educational class by itself. Education in terms of the applied subjects is as truly education as that in terms of other subjects, no less and no more if the teachers are as well trained, the institutions as well equipped, and the work as well done. The distinction in educational results between these complementary lines of effort is now happily vanished. Accepting this parity places a State in readiness for a harmonious development of its institutions.

The particular factor that has introduced the inharmony into many of the States is the rise of the land-grant college. In about half the States this institution is a part of the State university. In these cases the difficulties are now reduced to a minimum, while in some States they have been practically eliminated. In the States in which the land-grant college is separate the conflicts and duplications are naturally most marked. At one time it was thought to be the wisest policy to separate the institutions, because their fields of work were supposed to be incompatible, but at present, when all institutions of higher education are so rapidly expanding, there is widespread feeling that the land-grant college is best united with the university or incorporated into it. When a harmonious State procedure has been devised, however, there may still be certain very marked advantages in the separation. At all events, it is the responsibility of the State in such cases to make a coherent plan and to prevent conflict. This is now the major problem in educational administration in the United States, but it ought not to be difficult of solution if the adherents of the different institutions once accept the principles just stated. The conflicts between the different kinds of institutions result in large part from an attitude of mind.

Mere duplication of courses of study may not be any more disadvantageous or more to be deplored between two institutions than between the parts of one institution which is the size of the two. As will be pointed out presently, the cost to the people may not be increased. Two or more State institutions of the same grade, but with different fields, may, indeed, produce a most wholesome stimulation, if they do not inharmoniously overlap, giving to the State a spirited and progressive development, preventing ingrowing, and separating its student body into groups small enough for the best educational results. The different faculties, working under separate administrations and developing in somewhat unlike directions, may add very much to the achievement of the State.

In dealing with the problems of duplication as manifested in the practice of the Iowa State institutions the commission has been guided by what may be described as the principle of "major and service lines" of work. In accordance with this principle, which is implicit in the considerations adduced above, each State institution should have assigned to it certain major fields which it may be expected to develop to their fullest extent. Agriculture at the State college of agriculture and mechanic arts is such a major line. Latin, German, French, history, political science, psychology at the Iowa State University are such major lines. Service lines are such subordinate subjects as are essential to the proper cultivation of a major line. The amount required is generally not very large. English is such a service line for engineering and agriculture at the State college. Institutions may well overlap as regards the relation of their service lines to one another and more particularly as regards the relation of their major to their service lines. English is a major line at the State university, a service line at the State college. But there should be no material overlapping of major lines.

In many parts of the educational field such a division affords a rational and practicable principle of administration. Between the State university and the State college this division would at present reserve as major lines to the institution at Ames agriculture, veterinary medicine, home economics, and certain departments of engineering to be later determined. It would make all other subjects at Ames service subjects, in no case to be developed beyond the point at which the needs of the major subjects are supplied. In the actual working of this principle it would result that a moderate amount of elementary collegiate work might be given at the State college in the languages and humanities and certain of the sciences, but that they would presumably never go beyond these rudimentary stages. At the State university agriculture and certain fields of engineering, if cultivated at all, would in the same way have a place only as service subjects contributory to the major lines allotted to the institution.

Certain subjects do not fall readily into line on such a principle of division. Chemistry, for example, has an obvious place at the State university and also at the State college. Even aside from "chemical engineering" as such, chemistry is involved in many engineering processes and problems to a degree absolutely demanding its presence at the State college and making it practically difficult to determine to what extent it is merely a service subject and to what a major line. This embarrassment regarding chemistry is even greater when certain agricultural problems and the work of the experiment stations are taken into account.[1] Physics, zoology, bacteriology, and botany also present similar perplexities.

It seems to the commission that the detailed adjustments of these cases of overlapping, once the main principle has been accepted, are all obviously capable of amicable settlement by means of a conference consisting of some convenient number of representatives of the faculties of the institutions affected (perhaps five from each), elected by the faculties, and sitting with a committee of members of the State board of education. Such a conference might meet at stated periods, perhaps annually, to consider and adjust any difficulties that may arise from time to time. Meantime the principle of the major and the service lines will automatically settle the status of by far the larger number of subjects and forthwith determine whether in a particular institution they shall be developed beyond their elementary stages.

It may be properly remarked at this point that the oft-raised objection to the alleged exorbitant cost of duplication when the same subject is taught at two State institutions is largely specious. It costs no more to teach two sections of English at Ames and two at Iowa City than it does to teach four sections at Iowa City, assuming that the instructors are paid at the same rate in both places and that the size of the classes is kept constant at the point of maximum instructional efficiency. The overhead charge may be somewhat larger when the work is done at two places, but this is not necessarily the case. In any event the main objection to duplication of work in State institutions like those of Iowa is not expense, but the stimulation of unwholesome competition with all its evil consequences.[2]

Once this principle of major and service lines is adopted, the whole situation clears up not only as regards intramural work, but also as regards extension work. An institution would be permitted to do extension work only in a major line. This itself would avoid the duplication and overlapping now threatened, and if the safeguard elsewhere recommended (see p. 77) of an annual conference of the extension officials of the several institutions is provided, there need never arise any serious problem of maladjustment.

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[1] For a further discussion of chemistry, see p. 69.

[2] The relations of the State teachers college to the State university and to the State college have elicited much less public comment than the relations of the latter two institutions to one another, in spite of the fact that at present the liberal arts work at Cedar Falls and at Iowa City squarely and unequivocally overlaps.

The commission is of the opinion that in a Commonwealth with the geographical, economic, and social characteristics of Iowa there might well be justification for several State institutions of collegiate grade in different parts of the State; that so far as concerns strictly collegiate work, there is no very grave objection to be urged against the present practice of offering such work in three different places, although the justification would be greater if the three were in more widely separated localities, and, as indicated elsewhere (see p. 54) the wisdom of continuing the final two years of work at the State teachers college is questioned. But the commission is unable to see that there can in the last analysis be any justification for sweeping duplication in the range of advanced and professional work. It would certainly strike every unbiased observer as absurd to urge that there should be two medical schools conducted by the State at different points. It would seem equally absurd to conduct two law schools. Neither the size of the State nor the educational needs of that portion of the country in which the State of Iowa is located can possibly be held to justify such duplication. Abundant expert opinion upon this matter is available in the actions of the controlling authorities in charge of medical and legal education in this country. Considered strictly on its merits, there seems to be no more prima facie justification for two engineering schools. Indeed there are certain branches of engineering work which ought not to be undertaken at all in Iowa. Marine engineering, for example, surely has no place in an inland agricultural community. The theory that a State is under obligation to give instruction in every field of learning is regarded as fallacious, and each new undertaking of an educational kind ought to be subjected to the critical scrutiny of disinterested experts.

The commission is of the opinion that the continuance of the two schools of engineering as at present organized is uneconomical and indefensible, especially in so far as it concerns the development of upper-class and graduate work. At least three methods of readjustment are possible. (1) The horizontal, by which one school would become a strictly graduate institution and the other school an undergraduate institution. This would accord well with the mature judgment of a large section of the engineering profession that a bachelor's degree or two or three years of the work in liberal arts and science leading to such a degree, is the best possible foundation for the technical training of an engineer. In the judgment of the commission, this method is not at present applicable to the Iowa situation. Unless the principle were applied drastically, so as to require a bachelor's degree for entrance to the more advanced of the schools, the difficulties of the present academic situation would not be materially lessened, and the possible overlapping in the field of extension work would require altogether separate consideration and treatment.

(2) The union of the two schools in one place under highly expert direction. The commission is unanimously convinced that this is the method by which engineering work under State support in Iowa could best be maintained and developed. No other method will so certainly insure the permanent elimination of the causes of friction, irritation, unwholesome competition, and wasteful duplication of high-class men and equipment for advanced work. It is scarcely conceivable that the State, if it did not now have two schools of engineering, would consider the establishment of more than one. The commission is not unmindful of the weight of arguments which may be adduced in support of the unification of this work at the State university, where it would enjoy the stimulation of other high-grade professional schools, where it would have a strong backing in the pure sciences and helpful contact with the liberal arts, and where it could be maintained on a high level, free from the tug of artisanship. On the other hand, the commission does not forget the fact that the land-grant colleges are quite as much bound by their essential character to develop mechanic arts (usually interpreted as synonymous with engineering) on an equal footing with agriculture. In view of this necessity for the joint development of agriculture and engineering, the commission believes that such union of schools, if it could be accomplished, should be made at the Iowa State College.

(3) If this second method is adjudged impracticable of application, considering the present condition of institutional and popular sentiment in Iowa, the commission recommends that a definite vertical (or topical) division of engineering should be carefully worked out by the board of education in conference with a small group of expert engineers, wholly unconnected with either institution, each of whom should be a member of one or another of the four American societies of civil, electrical, mechanical, and mining engineering. All four societies should be represented. When once this division has been determined, it should be rigidly enforced by all the educational authorities concerned. Perhaps this could be accomplished under a single dean of engineering for the two institutions, supplemented by unremitting detailed examination on the part of the board of announcements of engineering curricula and courses. In such a division it appears likely that the work in municipal and sanitary engineering, hydraulic engineering, and perhaps structural engineering, should be conducted at the State university, and that the work in highway, transportation, electrical, and mechanical engi-

neering should be developed at the State college. The necessity for work in mining, ceramic, or chemical engineering, and the location of this work, are matters for future consideration, in view of recommendations made elsewhere in this report and the possible future report of such a commission of impartial engineering experts as is suggested and urged.

Whether the work in domestic science can be regarded as up to the present time sufficiently differentiated on professional lines to warrant recognition as presenting a problem similar to that of medicine, law, and engineering may perhaps be questioned. Certainly the work as at present conducted relates itself as a service subject to a much wider range of nonprofessional interests and is as yet in too formative and unstable a condition to justify dogmatic assertion. The commission discusses this subject at length, however, and makes certain recommendations in Chapter VIII.

The position of music may serve to raise a similar question. Its development as a major line should unquestionably occur at the State university. It may well remain as a service line at the other State institutions.

With regard to the proposed discontinuance (beyond the second year of the professional work) of the work in liberal arts at teachers college, Cedar Falls, the commission is disposed to urge the wisdom of this on several grounds. In the first place, it seems reasonably clear that the institutions at Ames and Iowa City are at present abundantly able to care for all students who may be expected to seek the bachelor's degree in a State institution in Iowa. If the State wishes a third institution of a collegiate grade, it ought to be in the southern or western part of the State. Moreover, as has been clearly shown in another section of this report (Chap. I), the private institutions in the State are able to care for a very large proportion of the students who wish this degree, and between them and the other two State institutions all such students can be readily cared for. In the second place, the commission feels certain that at present, at least, the atmosphere of the institution is not unequivocally collegiate, and that students who now receive training there for the bachelor's degree are likely to miss certain valuable elements in such training. This opinion is based partly on the impression which one who has visited many institutions easily gets from even a brief contact with the situation, partly on consideration of the methods of class instruction, which are on the whole dominantly those of the high-school and junior-college type, and partly on the fact that the presence of a very large group of subcollegiate students inevitably affects the general intellectual maturity and academic tone of the work. In the third place, the amount of work now offered as of third and fourth year college grade is relatively small and may be regarded as only barely sufficient to round out a senior-college curriculum. A comparison of the program of courses at the State teachers college with that at the State university or at the State college of agriculture and mechanic arts will confirm this statement. To be sure, a comparison of some of the weaker sectarian colleges would not be unfavorable to the teachers college, but this is a comparison which a State institution would hardly wish to employ.

Under these circumstances the commission feels that the expenditure of money and energy represented in keeping up the last two years of collegiate work at Cedar Falls is probably not to be justified on its merits. The commission would not be understood in this opinion as intending to depreciate in any way the seriousness of the work offered, nor the devotion and earnestness of the staff of instruction. The professional work done here is creditable to the State and to the authorities of the school, but a division of energy such as is suggested would in the long run contribute to the efficiency of the State institutions as a whole. Such a program, if carried out, would not in our minds imply the reduction of the budget of this institution. Quite the contrary. It would mean concentrating all resources on the earlier portions of its work, where at present its greatest obligation is found, and where there are certainly at present massed the great majority of its students, as Tables 4 and 5 on page 56 will indicate.

More particularly the commission would call attention to the desirability of greatly enlarging the facilities for practice teaching at teachers college. The present practice school in immediate connection with the institution is already overtaxed, and the commission finds it difficult to believe that the facilities offered in the town of Cedar Falls are at present wholly adequate. The commission is quite clear that the general attendance at Cedar Falls ought not to be permitted to expand until thoroughly satisfactory provision is made for practice teaching.

If the board and the people of the State are disposed, on further consideration of the question, to agree with the commission that the appropriate function of the State teachers college is the preparation of teachers for rural and graded schools, and not the preparation of high-school teachers, or the granting of the bachelor's degree for courses in liberal arts, the commission is strongly of the opinion that the future development of the institution on somewhat different lines is desirable. It recommends, therefore, that the courses for elementary teachers, both rural and urban, be made three years in length, substantially one-third of the time to be devoted to professional subjects, and the rest to work dealing with the subject matter of instruction. Entrance to those courses should, as soon as possible, be based squarely on high-school graduation. Such courses should not, in the judgment of the commission, lead to degrees. It is persuaded that the improvement in the equipment of elementary, especially rural teachers, which this recommendation contemplates, would not only contribute vitally to the welfare of the State, but would place the State teachers college in a unique position of leadership among teacher-training institutions in the United States.

If the board does not see fit to adopt these suggestions, however, and if the plans at present in operation be continued, then the commission would advise that the last two years of the work be very greatly strengthened to bring it more nearly into line with the curricula of first-class institutions conferring the bachelor's degree.

TABLE 4.—*Attendance at Iowa State Teachers College, Cedar Falls.*

Courses.	1912–13	1913–14	1914–15	Total.
College courses [1]	649	420	560	1,629
Diploma courses	503	831	843	2,177
Subcollegiate	826	820	865	2,511
Unclassified and music	714	907	1,234	2,855
Total	2,692	2,978	3,502	9,172
Total diploma, subcollegiate, unclassified, and music students	2,043	2,558	2,942	7,543

[1] These figures include students entered as graduates as follows: 1912–13, 53; 1913–14, 45; 1914–15, 45 Juniors and seniors are listed in this group as follows: 1912–13, 170; 1913–14, 153; 1914–15, 193.

TABLE 5.—*Statistics of Iowa State Teachers College for five years, 1907–1912.*

Total number of individual students enrolled during the five years, each student counted only once		8,398
Students were qualified and trained for the following:		
(1) County school teachers, reaching the standard of county teachers' certificates		3,261
(2) General elementary teachers, having first-grade county certificate scholarship on admission		1,328
(3) Special grade and department teachers of all kinds—primary, kindergarten, music, drawing, home economics, etc		2,515
(4) Special music teachers		138
(5) Unclassified as to kind of work preferred		156
(6) High-school teachers—		
(*a*) With standard of North Central Association four-year college course	285	
(*b*) First-grade State certificate standard	300	
(*c*) Second-grade State certificate standard	300	
(*d*) Other special teachers, estimated	115	
		1,000
Total		8,398

Whether the suggestion made above be adopted or not, the commission is perfectly clear that there are to-day no agencies in Iowa adequate to furnish proper training to the number of teachers annually required in the schools of the State. This fact has evidently been recognized in the legislation providing for the addition of a year of normal training in certain high schools. The commission is fully cognizant of this situation, and its suggestion regarding teachers college is therefore in no sense directed to any lessening of the resources of the State in this direction. There should be additional normal schools established, in parts of the State remote from Cedar Falls and probably preferably in the southwest and northwest divisions of the State. If such normal schools were brought into intimate contact with the normal training high schools, and with the movement for the development of junior colleges in connection with the strong high schools which has gained great headway in many parts of the country, these several institutions could be made to reenforce one another in a most helpful way. An appreciable amount of serious collegiate work could be offered as a basis for professional training in these junior colleges on high-school foundations; and the normal schools, if brought into administrative contact with them, could furnish not only a spirit of professional standards and a corresponding stimulation, but could also be used to develop practice teaching work in various portions of the State now wholly unprovided with such facilities. A similar relationship could be cultivated between the normal schools and the normal training high schools.

In this connection attention should be called to the possibility of adding a group of strong men to the faculty of the teachers college (and to other normal schools, if established), who might give one-half of their time to instruction and the other half to service as members of the staff of the State superintendent of public instruction, supervising the work of the normal training high schools. Such an arrangement would greatly enhance the solidity and efficiency of the normal training courses and would bring both the State superintendent's office and the normal schools into most helpful organic connection with these high schools. Any measure that will improve the supervision of the training of rural teachers and that will put at their disposal added opportunities for practice teaching ought to be energetically fostered.

The foregoing discussion and the recommendations of the commission in this and subsequent chapters are based on the assumption that all three institutions are to be continued without essential change of character. The acts of the legislature making appropriations for the continued expansion of the institutions, including the development of graduate work, have established a presumption in favor of this interpretation.

The commission desires to call attention to one other aspect of the situation, however, which ought not to be overlooked. The college of agriculture and mechanic arts was created in response to the

Morrill land-grant act of 1862. In return for certain subsidies granted by the Federal Government at that time and at later times the State assumed the obligation to carry on instruction in agriculture and mechanic arts. Earlier in this chapter the commission expressed a belief in the substantial educational equivalence of the work carried on by the two types of institutions, the land-grant college and the State university. If this parity exists in other States, it certainly exists in Iowa. The commission is also about to recommend that graduate instruction and research work of the most advanced university type be encouraged at the Iowa State College. Nevertheless, such development of advanced work should relate itself exclusively to the limits established by the professional aims peculiar to the institution. This question is discussed at greater length in Chapters IV and V.

In closing this portion of the report, the commission desires to reiterate its conviction of the importance of applying strictly the principle of division advocated above to the work of the three State institutions. The State is probably rich enough to allow all of its institutions to develop as rapidly as the demands of students for instruction will warrant without regard to possible duplication of offerings. Indeed, the drawback to this policy is not primarily a financial one. It is rather that such a course will inevitably perpetuate intolerable mutual jealousies and antagonisms, tending to defeat all unity in the program of State education.

The five chapters following deal in some detail with various phases of duplication.

SUMMARY OF RECOMMENDATIONS.

1. The adoption of the principle of "major and service lines of work" at the three State institutions.
2. The creation of a conference consisting of members of the faculties of the institutions and the State board of education to adjust questions of overlapping not automatically determined by the establishment of major lines for each institution.
3. The readjustment of the work in engineering at the State university and the State college, according to one of three methods:
    (*a*) A horizontal division, assigning graduate work to one school and undergraduate work to the other.
    (*b*) The union of the two schools at one place.
    (*c*) A vertical division of work, assigning some branches of engineering to one institution and some to the other.
4. The discontinuance of the last two years in liberal arts at the Iowa State Teachers College, with suggestion of three-year non-degree courses for rural and grade teachers.
5. The enlargement of facilities for practice teaching at the State teachers college.

6. The establishment of additional normal schools.
7. The addition of men to the faculty of the State teachers college, to give half of their time to instruction and half as members of the staff of the State superintendent of public instruction and the supervision of work in the normal-training high schools.

Chapter IV.

GRADUATE WORK.

Next to engineering the field of graduate work undoubtedly offers the greatest area for the development of unwarranted and expensive duplication. The State board's request that the commission investigate graduate work indicates that the board has appreciated the danger which lies in this direction. The subject has seemed to the commission second in importance to none of those upon which advice has been asked. An account of the actual present status of graduate work at each of the institutions is submitted herewith and the attempt is made to point out how the principles developed in the preceding chapter may be applied to the avoidance of serious duplication and the friction of competition.

Graduate work of a high character is, and ought to be, carried on with increasing efficiency at both the Iowa State University and the Iowa State College. At the Iowa State Teachers College, the degree of master of didactics is conferred for a professional course representing 45 term hours. This, however, does not constitute really a graduate school or college, but is work offered chiefly during the summer session for college graduates who wish to take up the study of professional subjects. It is more nearly an extended undergraduate course, with the requirement of a thesis, than organized graduate work based upon an undergraduate foundation.

STATE UNIVERSITY OF IOWA.

The graduate college of the State university grew out of a standing committee, first appointed in 1893, to define the terms for granting master's degrees. Work leading to the doctor's degree began in 1898, and the graduate college was formally instituted in 1900. Since that time it has made steady advance in organization and in standards. The commission commends cordially the general sincerity and progressiveness of the graduate work done at the State university, especially in certain thoroughly organized departments like education, philosophy and psychology, history, and political science.

The State university makes a distinction between the admission to the graduate college and admission to candidacy for a degree, and endeavors to determine each case upon its own merits. This is in accordance with the common practice of graduate schools by which persons holding degrees from acceptable colleges are admitted probationally, and later, when they have demonstrated their capacity for work in the majors and minors selected, are admitted to candidacy for a particular degree. A student coming from a college about which there is question is tested by departments as to his major work only, but no test seems to be applied in regard to the general soundness of his training or the value of his minor work. The registration of students in graduate courses for the summer session appears to be handled more loosely than in the regular session, and the records of such students are in a less satisfactory condition. Neither in the regular session nor in the summer session does it seem to be necessary for a student registered in the graduate college to take any course designed for graduates only. A student who desires to enter the graduate college and take work only in a field for which he has had no preparation in his undergraduate work should be registered as an undergraduate, rather than a graduate, student until he is ready to carry advanced courses or courses for graduates only. The commission suggests the adoption of a rule by which no student may have graduate status unless a certain specified proportion of his registration is in courses for graduates only.[1]

A candidate for the master's degree is usually required in this graduate school, as in nearly all the strong graduate schools, to do work in residence during one collegiate year of approximately 36 weeks. The State University of Iowa, in common with some other institutions, accepts resident work in four summer sessions of 6 weeks each (24 weeks) as a minimum for satisfying this requirement, but students have usually been required to prepare theses outside of this residence period. This is in contrast with institutions like the University of Chicago, which makes precisely the same residence requirement of students working in the summer as of other students. The State University of Iowa has, however, worked out a plan for supplementing in some degree the work of the summer session through "projected registration," by which a student who has been in residence in graduate status at the university for at least one summer session may do work in absentia according to a plan agreed upon with some authorized instructor. Credits earned through projected registration may equal those previously earned in the same subject in residence. In a bulletin, the university states "that projected registration does not operate to reduce the residence requirement for a master's degree [but] may, however, operate to reduce materially the time requirement for earning the doctorate." The department of education is the one chiefly concerned with projected registration, since many of its students in research find their problems outside the campus and in connection with their professional duties. Some 12 or 15 students are thus registered and working in cooperation with certain departments upon problems for which they will later receive credit. Projected registration might be called the temporary substitute for the fifth or sixth summer session of work as a part of the requirement for the master's degree.

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[1] The State university has one almost unique group of graduate students, those who are candidates for the M. S. in medicine, who have been recommended by the faculty of the college of medicine upon the basis of an M. D. degree. This represents the extreme of tolerance, since the announced requirement for admission of students to candidacy for such a degree is a satisfactory high-school course, plus a four years' course in medicine. The latter may be taken in a medical school which does not require any college work for entrance. The university announces no list of approved medical colleges whose graduates may be thus received. The work for the degree appears to be done mainly in absentia by practicing physicians. Two or three persons per year for about 10 years have been granted this M. S. degree. The registration for this degree has fallen off, however, so that the dean of the graduate school reports only one student so registered in 1915–16.

Graduate work is offered under 25 departmental headings, including engineering, archæology and the history of art, home economics, histology and embryology, and five other departments in the college of medicine. The apportionment and scope of the graduate work in the university seems to be variously determined, by the graduate faculty (all full professors giving graduate work), by the graduate council of seven men (one elected by the graduate faculty for a seven years' term), or by the quality of leadership in particular departments. Individual instructors get their authority to give graduate courses from the departments. There is consequently a wide difference in the amount and spirit of graduate work in different departments. In one department, for instance, there are 16 persons, of whom only 1 is a full professor. It was stated to the commission that but one of these was distinguished for the published results of his research, though several others are directing thesis work or engaged in "creative work" or in various kinds of learned activity, which are regarded as on the same basis as research.

It is clear to the commission that the university can not do equally strong work in all the departments announcing graduate courses, even if an equal number of graduate students should appear for each department. Like every other university which does graduate work, it must choose which departments shall be encouraged to undertake work of an advanced sort, leading, for example, to the doctor's degree. This determination should be made by a body competent to express the judgment of the institution as a whole, and the expression of this judgment should result in the formulation of a system or policy for the best utilization of such portions of the energy of the institution as may be devoted to graduate work. The commission did not get the impression that the State university was thus developing its graduate work. Too much appears to be left to the will of the head of the particular department as to whether his department shall give courses, for example, which will lead to the doctor's degree. By vote of the graduate faculty, or, perhaps, better, of the university senate, a body which has no "board" on graduate work and which seems to fall short of realizing its possibilities, certain departments should be especially encouraged to develop the most advanced courses of instruction and research, by special care in selecting new men, by the encouraging of the promising research workers already on the staff, and by generous appropriations in the university budget. In this way the prestige of the university will be more enhanced than by trying to keep all departments on an even front. Fluctuations in the strength of departments are bound to occur with the coming and going of strong, productive men, but the accumulation of library and apparatus will fluctuate much less under the policy here suggested. By way of illustration, the university is peculiarly fitted to carry on the finest sort of graduate work in geology; it is already strong in physics, psychology, and education; it ought not to attempt, on the other hand, to build up courses in entomology, agronomy, or plant breeding.

IOWA STATE COLLEGE.

The graduate division of the Iowa State College should, in the judgment of the commission, develop naturally and properly out of certain sections of the undergraduate work. It should follow those major lines of work for which the institution is constituted. Its graduate work, therefore, should be supplementary to that of the State university, and coordinate with it, but without any such overlapping as is permissible and perhaps desirable in the first two years of undergraduate curricula in certain courses. Wherever this institution or the State university diverges from this principle, it should be brought back by the board or by some other correlating agency.

The graduate division of the State college, which was established in 1913, offers major and minor work for the master's degree in 18 subjects, "with special application to the industries." Aside from those subjects which are unquestionably related to the major lines of agriculture, engineering, etc., there are included in this group, mathematics, economics, geology, chemistry, and zoology. The subjects or departments in which the degree of doctor of philosophy may be taken are decided upon by the faculty of the graduate division, subject to the final determination of the matter by the board of education. At present they are the following: Agronomy, animal husbandry, bacteriology, botany, chemistry, dairying, geology, horticulture, and zoology.

The conditions upon which professional degrees in engineering are granted are: (1) Graduation from a four years' curriculum in engineering, one year of residence study, and one year of professional experience, and the preparation of a satisfactory thesis; (2) graduation from a regular four years' curriculum in engineering, five years of professional experience, and the preparation of a satisfactory thesis; (3) graduation from a regular five years' curriculum in engineering, one year of professional experience, and the preparation of a satisfactory thesis. The degree of master of agriculture requires graduation from a four years' curriculum, five years of experience in practical or professional agriculture, and the presentation of a thesis. The combination degree in agriculture and engineering is granted by the cooperation of the two divisions.

Admission to the graduate division, of which the president is the acting dean, presupposes graduation from a college or university of approved standing. In addition, evidence of the necessary prerequisite training for the course to be pursued is required, since it is quite possible that a graduate from a narrow arts curriculum would find himself wholly unprepared to undertake graduate work in a subject like crop production, in which the college offers work leading to the degree of doctor of philosophy. For the master's degree, one year of work in residence and the completion of 30 hours are ordinarily required. Of the 30 hours, 20 must be, and all of the 30 may be, in the major subject. The catalogue states that major work will ordinarily be restricted to graduate subjects. Under certain restrictions, one-half of the work required for the master's degree may be done in absentia. In these cases, the residence work may be accomplished by three summer sessions of six weeks each. The requirements for the degree of doctor of philosophy follow the usual announcements in such matters, except that of the three years of graduate work required only one appears to be necessarily a year of residence work, and that at the State college.

An examination of the records of graduate students admitted during 1914–15 indicates an unusually generous judgment of the sufficiency of the curricula of several institutions from which students have come, as a basis upon which to build graduate work. It is evident to anyone who knows much about these institutions that their curricula can not be the equivalent of those of the Iowa State College or of "other colleges and universities of approved standing." In other words, it is educationally impossible to combine in the same graduate courses, without sacrifice of standards, students who have had seven or eight years of work above the eighth grade and students who have had six years of work above the eighth grade. The larger number of students registered in the graduate division hold degrees from Iowa State College or from other institutions of unquestioned rank, like the State University of Iowa, the University of Nebraska, Grinnell College, or the Ohio State University. Mixed in with these are a considerable number of students from institutions which have hitherto required for admission only one or two years of high-school work, perhaps 10 units. Seven students from Oklahoma Agricultural and Mechanical College appear in the enrollment, two from Kansas State College, two from Clemson College (the South Carolina Agricultural and Mechanical College), three from Oregon Agricultural College, and one from Mississippi College of Agriculture and Mechanic Arts. Some of these students came directly to Ames after their graduation.

The largest number of graduate students in any one department is in agronomy. In 1914–15 there were in residence 10 students; 1 each in soil fertility, soil physics, and farm management; 3 in soil bacteriology; and 4 in crop production. In 1915–16 there were 9 students; 1 in soil fertility, and 4 each in soil bacteriology and crop production. The men for 1915–16 were selected from some 35 or 40 applicants. Among those selected were graduates of Texas Agricultural and Mechanical College, Oklahoma Agricultural and Mechanical College (a bachelor of science, 1915), and Clemson College.

The commission is of the opinion that much greater care should be exercised by the graduate division of the State college in admitting students from institutions whose work is not based squarely on the requirement of a standard high-school course, representing at least 14 units. In justice to the Iowa State College it should be said that it is not alone in this practice of objectionably lax admission to its graduate school of students coming from agricultural and mechanical colleges which have not yet seen their way clear to the enforcement of standard entrance requirements. The continuance of this practice is bound to reflect upon the standards of Iowa State College, in that students who transfer from its graduate division to other graduate schools, like Chicago or Cornell, will be very likely to be discounted in their credits earned at Ames.

Certain of these institutions have, to be sure, recently raised their entrance requirements. Students graduating before 1914, however, entered before these improvements in standards.

The commission recognizes the difficulty which now exists and which is bound to continue in defining the scope and upreach of the graduate work which should be carried on by the State university and the State college. As a means of making the adjustments that will be necessary as long as the departments in these institutions are directed by strong, vigorous, resourceful, ambitious, scholarly men, the commission recommends the creation by the board of education of a standing committee on graduate work to be composed of two of its own members and three members each from institutions giving graduate work, the latter to be elected for a term of years by the graduate faculty in every case. It is further recommended that this committee be granted power to review the present offerings of graduate courses, to make such definitions and adjustments between institutions as may be required in order to secure conformity to the principle of major lines enunciated elsewhere, and that no institution under the authority of the board shall inaugurate any new lines or announce any new courses without the approval of this committee in advance. Through such a committee the graduate work of the various institutions will be subjected to at least an annual review and discussion not by an outside body but by men who are actively engaged in building up graduate and research work in the State institutions. It is conceivable, for example, that such a committee would decide that graduate work and research in such subjects as history, modern languages, political science, psychology, mathematics, and education ought to be developed only at the State university; that such subjects as agronomy, animal husbandry, horticulture, and entomology should be developed only at the State college; and that certain specified branches of such subjects as chemistry, botany, zoology, and bacteriology may be properly developed in one location or the other, but without duplication.

In making this recommendation, the commission would make it perfectly clear that the purpose is to promote, rather than limit, the development of graduate and research work, which shall be fostered by the combined wisdom of the great institutions of the State and backed by the resources of a rich Commonwealth.

SUMMARY OF RECOMMENDATIONS.

1. The encouragement of the development of graduate work at the Iowa State University and the Iowa State College of Agriculture and Mechanic Arts along the major lines of the institutions.
2. The adoption of a rule by the university according graduate status to none but students having a definite proportion of their registration in courses for graduates only.
3. The determination by the university senate, or some other representative body, of the departments to be encouraged to develop graduate courses.
4. The exercise of greater care by the graduate division of the State college in admitting students from other institutions to graduate standing.[1]
5. The creation of a standing committee on graduate work, to consist of two members of the State board of education and three members each from the institutions giving graduate work, the latter to be elected for a term of years by the graduate faculties.

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[1] An announcement now coming out provides for exclusion of graduates of low-grade schools.

Chapter V.

LIBERAL ARTS WORK IN THE IOWA STATE COLLEGE.

The commission has been asked by the State board of education to investigate the following question: "Does the liberal arts work offered at the Iowa State College of Agriculture and Mechanic Arts come within the proper scope of that institution when considered in connection with the other educational institutions of the State?" In the judgment of the commission, the issues raised by this question, as by the question relating to graduate work, are vital. They lie at the very root of the State's higher educational problem. Special attention has, therefore, been given to the subject, and a detailed discussion of principles and practices is presented in this chapter and in the appendix.

The necessity of introducing some courses in liberal arts and science subjects into the curricula leading to the various degrees at the Iowa State College will not be disputed. While the work prescribed for degrees in agriculture, engineering, home economics, veterinary medicine, etc., is more or less technical in all the State universities or land-grant colleges, such work is nevertheless undergraduate, and, with the possible exception of veterinary medicine, not professional in its nature. It is now upon a scientific collegiate basis, rather than upon a mechanic arts or purely vocational basis. The first two years of the undergraduate curricula in agriculture and engineering in nearly all of the strong universities of the United States and in specialized institutions like the New York College of Agriculture in Cornell University and the Massachusetts Institute of Technology are largely made up of work in the fundamental mathematical and scientific subjects, such as botany, chemistry, mathematics, and zoology, in combination with varying amounts of English composition and literature, history, modern languages, economics, political science, and sociology. It happens not infrequently also that general or survey courses in the latter group of subjects are put into the last two years of the undergraduate course. It is of the greatest importance in this connection to keep clearly in mind the distinction, which is elaborated elsewhere in this report, between the major lines of work in an institution like the Iowa State College, and the group of liberal arts and science subjects here under discussion. The latter are and ought to be auxiliary or service subjects, which serve either as the foundation or as buttresses for the main structure.

The principle on which liberalizing subjects, whether humanistic or scientific, should be included in the schedule of work of an institution organized by the State for the express purpose of developing curricula in agriculture, engineering, etc., may be stated thus: Only such liberalizing subjects should be incorporated in the offerings of the institution, and only in such amounts, as will wisely reenforce the technical or semitechnical specialized curricula for whose development the institution was constituted. In all institutions like the Iowa State College attempts to develop courses in these subjects for themselves are certain to be made. Strong teachers will naturally urge elaboration of the subjects in which they are interested, sometimes in disregard of the purposes of the institution as a whole. Courses may even be offered as a means of holding students already registered who have changed their professional or academic intentions. If there be such students in the institution, they should, of course, be directed to seek instruction in other institutions emphasizing other curricula.

It is the commission's opinion that all these attempts should be checked by the governing board, even though the plea be made that the cost of such tentative development is small, or that the number of students is not large, or that a *local* demand is to be met. To take specific examples, the development of extended courses in psychology, in the history and theory of education, in political science, or in advanced mathematics, in the Iowa State College should be authorized by the board only upon proof that such courses are indispensable for the purpose of supporting regular work in the major lines already mentioned. The problem of the relation between undergraduate work and graduate work in the different departments in the Iowa State College is more fully discussed in another place. If the principle of the establishment of major lines of work, forming the main structure in the curricula of the State institutions, be accepted, another principle will be at once clearly defined. All departments of an institution must be treated alike in the matter of thoroughly adequate provisions of men and apparatus with which to do the work required by the purposes of the college. All departments need not be treated alike, however, in facilities for expansion and outreach into graduate courses and research. A service department is a service department and not a major department, and it must so remain, if waste and unwarrantable duplication of effort and expenditure are to be avoided.[1]

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[1] Certain departments, like chemistry and botany, by their intimate and organic relation with the research work of experiment stations, will need to develop specialized forms of work in the direction of major lines; for example, soil chemistry, organic chemistry, plant pathology, and dairy bacteriology. But in all such cases a clear differentiation of departmental functions should be enforced, for the State does not need two groups of research men and two research laboratories for plant pathology or dairy bacteriology. It is even conceivable that a strong man in one of the other State institutions might develop his talents along one of these lines to a point which would make it desirable to transfer him to the State college staff instead of continuing his work on the old location.

Courses in practically all of the subjects referred to above are taught in the Iowa State College and embodied in widely varying proportions in the curricula leading to different degrees. Some of them, for example, English and mathematics, are required of nearly all students in agriculture, engineering, and home economics. The commission finds no evidence that the number of instructors in these fundamental subjects, as taught in the first and second years, is too large or that the services of these instructors are uneconomically utilized. Furthermore, the number of semester hours required in these subjects in the curriculum of the first two years does not appear excessive or ill balanced. Work in English composition, elementary mathematics, and like subjects for students of the first and second years, if the number of students in each place exceeds 200, is probably carried on just as economically and just as effectively in two or three places as in one. Two hundred students will keep fully occupied two instructors in first-year mathematics, two in chemistry, and two in rhetoric; similarly, laboratory space for 600 first-year students in chemistry and zoology would not be greatly economized if work were to be done in one place, as contrasted with a more or less equal distribution of it in three places. In other words, the commission finds no evidence of unnecessary or wasteful duplication of work of the first and second years in the three State-supported institutions in Iowa. Each has its corps of instructors for these years fully occupied, and pressure upon its space for the work of these two years is not below normal.

Substantially the same thing is true of the essential service courses in the third and fourth years in the curricula in agriculture and home economics in the State college. The prescribed courses in such curricula, in mathematics, physics, chemistry, botany, zoology, English, economics, education, and psychology is warranted by the normal needs of these groups of students. In order to meet the requirements of the State law in regard to the certification of teachers, students who wish to be prepared upon graduation to teach agriculture, home economics, and manual training must have had instruction in certain prescribed subjects. The obligation to give this instruction can scarcely be called optional for the institution unless some device is worked out by which a student may obtain these courses elsewhere through an organized plan of inter-institutional movement of students. Such plans are not yet common in America.

In the more advanced and specialized courses the commission finds considerable duplication of courses offered elsewhere. Much of this seems unwise and unwarranted when judged by the principle announced by the college as covering its service departments of instruction. The commission finds an illustration of this tendency in the department of chemistry. The college must maintain its undergraduate work in chemistry upon a high level; it must provide every necessary facility for the chemical side of the work of the agricultural and engineering experiment stations. Undoubtedly it must also develop certain lines of graduate work in chemistry connected with the agricultural experiment station, which has a special obligation to the Federal Government and the engineering experiment station. It does not follow, however, that the college would be warranted in attempting to establish a great school of chemical instruction and research, covering every phase of the vast and varied subject. If the State is to support several departments in different institutions, it may well insist upon strictly defined specialized lines for each institution. Unquestionably the State college must undertake a great development of chemical research as related to agriculture, but the preparation of men to be research workers in numerous other branches of chemistry is not necessarily an obligation laid upon the State or upon this particular college.[1]

The commission recommends a thorough-going revision of the announcements of this department and the elimination of all courses that are not strictly in conformity with the principle of the development of major lines, and do not directly reenforce the work of the experiment stations. An advisory committee of members of the American Chemical Society, who have no relation whatever to the State college and State university, could undoubtedly assist the board very materially in determining the lines of advanced work in chemistry which each institution should cultivate.

The charge has frequently been made and widely believed that the Iowa State College has endeavored to build up a curriculum in liberal arts and sciences leading to a nontechnical degree either in general science or in arts. The present president of the college and others in responsible positions disclaim in most explicit terms any attempt to build up such a curriculum. They insist that only such liberal arts subjects and only so much of such subjects will be taught by the institution as will be needed for a properly balanced and enriched curriculum in agriculture, engineering, home economics, and veterinary science. While the commission accepts this statement as an accurate description of the present intention, there is some evidence that an attempt was made at an earlier period in the history of this college to formulate a curriculum which might have been described not inaccurately as a curriculum of liberal arts and sciences, even though it was not intended to have it lead to the degree of bachelor of arts. The commission found some conflict of testimony as to the definiteness and vigor of this attempt. Possibly part of the difference of opinion rose from the difference of concept as to what was meant by a general or a liberal arts course. Since both the humanities and the sciences are now accepted as proper liberalizing disciplines, the commission does not distinguish between a curriculum in which a student may major in geology or mathematics and receive a degree of bachelor of science in general science, and a curriculum in which a student may major in philosophy or economics. Courses offered in several departments in the general catalog for 1915–16 indicate a past or present ambition to expand certain subjects beyond the needs of the curricula in which they constitute a subsidiary element.

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[1] For a comparison between the offerings in chemistry by the Iowa State College and by other institutions, see Appendix, p. 141.

It is necessary, therefore, to examine the contention that all the work in liberal arts and pure science now offered is primarily subordinated to the interests of students taking one of the curricula leading to degrees in agriculture, engineering, home economics, etc. In place of the "colleges" commonly found in the larger universities, this institution has a grouping of departments designated as "divisions," for example, the division of engineering, the division of agriculture. It is evident that the division of industrial science is constituted in a different manner from the other divisions, and that the procedure of a student in this division, if not his original intention, is likely to differ quite markedly from the procedure of a student who enters upon the curricula in agriculture or engineering. The catalog for 1915–16, page 232, states:

> The courses in industrial science are not "liberal arts courses." They are courses intended to fit the student for certain specialized fields of professional activity * * *. An opportunity is offered for the election of an amount of general work approximately equal to that allowed or required in other techinical courses of the institution * * *. Neither are those courses to be regarded as *general* science courses, for as soon as the scientific and linguistic foundation of the freshman and a part of the sophomore year has been secured, the student is required to specialize in some science and to relate it definitely to its industrial and professional phases.

The division of industrial science includes the departments of—

- Bacteriology and hygiene.
- Botany.
- Chemistry.
- Economics.
- English.
- History and psychology.
- Library.
- Mathematics.
- Military science and tactics.
- Modern languages.
- Music.
- Physical training.
- Public speaking.
- Zoology.

Logically geology and physics should be here, but they are, as it happens, departments in other divisions.

In the division of industrial science there are four curricula leading to the degree of bachelor of science with major work in one of the following departments:

Bacteriology and hygiene.
Botany.
Chemistry.
Economics.
Entomology.
Geology.
Mathematics.
Physics.
Veterinary anatomy.
Veterinary pathology.
Veterinary physiology.
Zoology.

Special groups in this department are:

Applied botany.
Applied chemistry.
Applied entomology.
Applied geology.

Joint or five-year curricula are offered in chemical engineering, agricultural engineering, and home economics. A six-year combined curriculum with veterinary medicine is also provided.

The curriculum of the freshman year in industrial science "leading to the degree of bachelor of science (in some major science)" has no industrial subject whatever in its total of 34 or 37 hours, unless 2 hours of the industrial history of the United States or of the economic history of American agriculture be so characterized. In this respect the curriculum does not greatly differ from the curriculum in agriculture. In the sophomore year, 16 hours of "science electives" and 12 hours of free electives are included in the total of 36 hours. The only industrial subjects that appear here in the science electives are veterinary anatomy, veterinary pathology, and veterinary physiology. The major for the junior and senior years requires that at least 20 hours out of a total of 64 shall be chosen from the major subjects enumerated above.

From these statements it appears that a student in getting his bachelor of science degree might reduce the elements which are really industrial to a very low minimum. If his major were in economics, mathematics, or geology, he would have 2 hours of industrial subjects in the freshman year, none in the sophomore year, and a maximum of 24 in his junior and senior years, with a possibility of materially reducing the 24 with the approval of the proper authorities. This is not far from the substance of a curriculum in liberal arts and sciences. The distinction between a major in geology and a major in history is not material, if the principle of prescribed courses along major technological lines, in accordance with the purpose of the college, is accepted. While the curriculum does not permit a major in such humanistic subjects as English, modern languages, and education, each of these subjects may have a considerable representation through the free electives.

It does not appear that many of the relatively small number of students taking the degree in industrial science have been allowed to abuse the opportunities which exist for making extreme schedules.

In the following paragraphs the offerings of three of the departments included in the division of industrial science are analyzed with a view to determining how far they have conformed in their development to the limitations laid upon them as service departments subordinate to the major technological lines of the college. An analysis of the offerings of four other departments in the same division is given in the appendix, page 140.

An analysis of the department of English and the department of literature, which appear to be really one department, shows that the principle of subordination of the work of these departments to the major purpose of the college is well followed out. The unexpectedly large number of courses in these departments is due to the splitting up of the elementary work into courses which, in the main, duplicate each other, having slightly varied credit values for different groups of students—for example, those in home economics or in agriculture. In English 15 courses are announced, of which 1 set of 2 courses, with 3 credit hours each, is designed for agricultural engineers; another for agricultural students; still another, with 2 hours' credit, for women. The total offerings, including these duplicates, are 36 semester hours, or, eliminating duplications. 22 semester hours.

In literature an elastic scheme of credit is elaborated. Literature 1, for example, may be taken for 1, 2, 3, or 4 hours' credit. The maximum obtainable in the general courses is 14 hours. An unusual group is described as "Literature as related to technical subjects and courses." One of these courses is "The scientific age in literature." Others are "Literature of farm and community life," "Reading for children at home and at school," and "The farm library." The total offerings in this group in the department of literature are 18 semester hours. No courses open to undergraduates and graduates, or to graduates only, are offered in these two departments.

The announcements in the department of economic science ("Applied economics and social science") indicate a disregard of the sentiment which has kept English and literature purely service departments. Six courses, totaling 16 semester hours, are for undergraduates. Twenty-four courses, totaling 17 semester hours, are for undergraduates and graduates, including two "seminar" courses ("current events," "reading economic magazines"), and one in research, involving public utilities, speculation, and "various other problems and phases of social and industrial life." One course in thesis and research work is for graduates only. The head of the department states that each course is given a distinctly agricultural or engineering bent and that it justifies itself as a semitechnical or industrial course, as distinguished from a liberal-arts course. It is the opinion of the commission, however, that so large a number of courses is unnecessary for the support of the allied interests, and that the wide differentiation indicated by the titles just quoted scarcely represents present institutional necessities. The commission would point out that the importance of a very thorough training in the principles of economics for an engineer who wishes to do research work in railroad rates, or in municipal or financial direction of public utilities, does not constitute an obligation on the part of this college to give such instruction, merely because it maintains a college of engineering and an engineering experiment station. A student wishing to make this combination of economics with engineering would do far better to go to an institution making a specialty of graduate work in economics. The State and the State college would be the gainer by such an arrangement, and would avoid the criticism which might be leveled at the present tendency to develop advanced and graduate courses in economics in this institution.

The courses in geology are designed—

> to meet the requirements of students in civil engineering, students in the division of agriculture, students specializing in geology and botany, students in mining engineering, those who expect to become mining geologists and professional geologists, and students taking general courses.

Accordingly, a student's major may be in geology in the division of industrial science. In so doing he would take a maximum of 49 hours in geology, mineralogy, and physiography, without choosing any electives from these subjects, save as alternates for prescribed courses. This curriculum, with geology as major, whether designed for professional geologists or "students taking general courses," does not differ materially from that which could be taken in a standard college of liberal arts and sciences, perhaps leading to an A. B. degree. It could not justly be described as auxiliary to any technological or semiprofessional purpose in agriculture or engineering.

In the department of geology 28 courses are announced—4 for undergraduates, 18 for undergraduates and graduates, and 6 for graduates only. These represent a total of about 95 semester hours, covering work in geology, mineralogy, petrology, petrography, stratigraphy, cartography, physiography, and meteorology. The staff of instruction consists of one professor, who is also professor of engineering and vice dean of the division of engineering, and one assistant professor. Six graduate courses are announced by the professor, with no indication of alternation in the giving of the courses year by year. Special work in the thesis course, with five hours' credit, may be taken in such specialties as metamorphism and stratigraphic geology. Except for the courses that may be used for a major in industrial science or in one of the "general courses," the amount of work called for in this department by students in agriculture and engineering, even including mining engineering, would not require more than one-half the present offerings.

The commission is clearly of the opinion that the work of this department, as announced in the catalogue for 1915–16, indicates the existence of a large duplication of the work done at the State university. Geology as a major subject in the curriculum in industrial science and in any other curriculum designed to train professional geologists should be eliminated from the State college. The State does not need two research or graduate departments of geology, for the number of graduate students is not likely, in the near future, to be very large. The State university is in direct contact with the office of the State geologist and the great collections belonging to that office. Because of the development already attained at the State university under these conditions, that institution is the logical and proper place for training all students who wish advanced work in geology. At the State university 19 courses, totaling 59 hours, are offered, besides 6 research courses, for which specific hours of credit are not announced. The department includes the same general scope of work as at the State college, and instruction is given by two professors, one instructor, and one assistant.

The State college must, of course, provide general courses in geology, meteorology, etc., in a service department conducted as such for students in agriculture and engineering, but the department of geology should be kept at that limit. If, as is quite possible, a student should now and then be developed who desires to make geology a profession, or who seeks to strengthen himself as a mining geologist, provision should be made for his transfer to the State university or to some other institution with a sufficient number of mining or geological students in its advanced or graduate courses to give a distinctly professional atmosphere and momentum, to create in him a real scientific or professional enthusiasm. In 1914–15 the registration in mining engineering in the State college was: Senior class, 3; junior class, 4; sophomore class, 0; freshman class, 3. A group so small, even if kept carefully segregated, would be practically lost in the body of engineering and agricultural students.

In order that the State college may avoid all further suspicion that it is endeavoring to build up a curriculum of liberal arts, the commission recommends that its officers take immediate steps (1) to confine the offerings of the departments included in the division of industrial science to such scope as is appropriate to purely service departments and (2) so to recast the requirements for the degree of bachelor of science in this division as to render it impossible for any student to secure the degree without pursuing industrial or professional courses to an amount substantially equal to that required in other technical courses in the institution. These steps the commission thinks are necessary to make the work in this department coincide with the catalogue announcement quoted on page 70.

SUMMARY OF RECOMMENDATIONS.

1. The strict enforcement by the State board of education of the principle that departments of liberal arts and sciences at the Iowa State College of Agriculture and Mechanic Arts shall be simply service departments; especially the revision of the work offered in the departments of economic science, geology, physics, and mathematics to secure conformity to this principle.
2. The abandonment of courses in chemistry at the Iowa State College which neither contribute to the major lines of that institution nor reinforce the work of the experiment stations.
3. The revision of the requirements for the degree of bachelor of science in the division of industrial sciences to render it impossible to secure the degree except on completion of industrial and professional courses (in contradistinction to liberal arts courses) equal in amount to those required in technical curricula.

Chapter VI.

EXTENSION WORK.

The State board's memorandum, which in general has served as the commission's guide, says, under the caption "Extension Work":

> Would it be feasible or wise to consolidate the extension work of the three institutions under one head which would represent the institutions collectively and correlate the work? * * * More or less duplication is sure to result if this work is carried on independently. Your advice touching these points will be much appreciated.

The extension work of institutions of higher education is the taking of some part or parts of the institution to the people where they live. It is of two rather distinct kinds: (1) The giving of courses of instruction in the localities, representing similar courses at the institution itself; (2) instructing and aiding the people by means of many varieties of welfare work, rather than by recognized courses or sustained periods of instruction.

The former is the true university extension—the extending of the institution, by means of summarized and popularized courses of lectures and reading in the subjects that are regularly included in its curriculum. This formal type of enterprise at present occupies a very minor place in the extension field. An institution may now lend itself in many kinds of helpfulness and cooperate with any number of agencies and organizations, to disseminate information, to aid a person in his occupation, to meet the problems of a community, to set new forces in operation, to organize the intelligence of a constituency. This latter type of extension work has come primarily out of the land-grant colleges on their agricultural side, being an expression of their desire to reach a manifest need and to make the widest application of public funds. It is the expression of a new or decidedly modern intention in education. It is now recognized as a form of national as well as institutional effort, in the Smith-Lever bill, which was signed by President Wilson May 8, 1914, and which provides Federal appropriations for extension work in cooperation with State appropriations. This kind of extension enterprise is now reacting strongly on the older kind and on liberal-arts institutions.

In the State of Iowa the older form of university extension was early undertaken by the State university, and, although it is yet continued to some extent, the welfare type is now, as elsewhere, greatly in the ascendancy.[1]

The Smith-Lever Act defines cooperative agricultural extension work (as conducted by the State college) to be "the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise." Aside from a flat appropriation of $10,000 to each State ($480,000 for the United States), the proportion of the Federal appropriation that goes to any State is determined by the ratio that the rural population of the given State bears to the rural population of the United States, as shown by the next preceding Federal census, on condition that a sum equal to that which comes from the Federal funds shall be provided within each State. The total appropriation for cooperative agricultural extension that must be equaled by other than Federal funds will be $4,100,000 when the operation of the bill matures; it began with $600,000 and increases $500,000 each year for seven years.

With the enlargement of the fields and intentions of higher education, extension work, as well as graduate work, is a natural expression of the institution. It does not follow, however, that every department or unit in an institution may engage in extension work. The department must first be organized and developed effectively for its regular college teaching; the extension work, if it comes at all, should be the result of this internal maturity. In the case of more or less competing institutions in any State, founded on public funds, there must also be a good working understanding between all of them. Manifestly, the division of extension work between such different institutions can not be geographical, particularly if the institutions are chartered as State institutions covering the Commonwealth. The differentiation must lie primarily in the dividing of subject matter, recognizing the fact that the cooperative extension work of the land-grant colleges is clearly defined by Federal statute.

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[1] At the State university extension work was formally inaugurated by faculty action in October, 1891. Lectures of extension character were, however, given in 1887.

At Iowa State College extension work has been conducted almost since the foundation of the institution, and was being carried forward on a considerable scale when the first State appropriation was made in 1906.

The extension enterprises issuing from the three institutions in Iowa are uncorrelated. While there is no particular or damaging duplication at present, there is nevertheless danger in the situation, especially in municipal engineering and related lines, and the longer the condition continues the greater will be the likelihood of conflict. The difficulty lies in the nature of the situation in Iowa, whereby the people have not, by statute, accurately defined the spheres or at least the intentions of the institutions. No real reduction in the overlapping of public effort can be accomplished in the extension work unless it is accomplished also in the regular collegiate work. The remedy lies in adopting the principle of the major line of work elsewhere advised; from these major lines the extension enterprises may develop regularly and fully. This procedure would also have the effect of solidifying the extension enterprise within the institution itself, making it a regular part of the institutional life, issuing from the major lines, rather than a thing apart, organized in entire separation—although, of course, the administration of extension work will always demand special offices and sets of officers.

The commission recommends, as a means of reducing differences and adjusting difficulties between the three institutions in the field of extension work, that the board of education establish a conference composed of the persons immediately responsible for extension in each of the institutions and of a small special committee of the membership of the board itself, this conference to meet for discussion before the main enterprises for the year are laid out by the different institutions and as often thereafter as may be advisable. This conference should constitute a committee or council of guidance, without legislative authority.[1]

SUMMARY OF RECOMMENDATIONS.

1. The strict application of the principle of the major lines of work to the development of the extension enterprises of the three State institutions.
2. The establishment of a conference on extension work composed of members of the board of education and extension officers of the three institutions to discuss projects.

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[1] For an account of the methods and scope of the extension work of the three State institutions, see Appendix, p. 145.

Chapter VII.

DUPLICATION OF WORK IN PSYCHOLOGY AND EDUCATION.

The Iowa State Teachers College, at Cedar Falls, necessarily offers those subjects that are of special value to the professional training of teachers. Psychology and education are consequently furnished in reasonable amount, about 20 term hours of the former, about 30 of the latter (exclusive of some 20 hours of observation and practice teaching), and 2 hours each of logic and ethics.

This statement represents the operation of the schedule when repetition is disregarded. As a matter of fact three of the 5-hour education courses are given four times a year, another three times, and two twice in the year. So the total number of hours offered to students runs much higher than the figures given, although no one student could secure (exclusive of practice teaching) credit for more than the amount first mentioned. This program involves materially more, both of psychology and education, than the State law requires for first-class teaching certificates, but not more than is appropriate in a professional institution of this kind. Indeed, there might well be some development of the work in lines now either unrepresented or too meagerly represented.

At the University of Iowa there has been for many years a department of education and also a department of philosophy and psychology. In 1913 there was established a college of education with its own dean and special staff, which therefore replaces the old department of education. In recent years, in connection with the general growth of the university, a considerable amount of graduate work has been developed both in psychology and education. The organization of both branches of work appears to be sound, and the large number of students electing courses in these departments would seem to indicate that they are fulfilling in large measure a need definitely felt by the student body. No doubt the attendance of students on these courses is largely affected by the State law, which requires that first-class teaching certificates may be issued only to persons who have successfully passed 6 units of work in psychology and 14 units of work in education. At the present time the college of education is offering roughly 50 credit hours, excluding research work, but including the summer term; the department of philosophy and psychology offers in psychology approximately 36 hours, exclusive of research and inclusive of the summer session. These figures are approximate only, because the work necessarily varies slightly from year to year and is likely to be particularly variable in the summer term. Both departments are handling large groups of students in a creditable manner. (See Table 6.) There would seem to be no reason why they should not be permitted to develop in response to any genuine demands as rapidly as the financial resources of the institution and a just regard to the similar development of other academic interests will permit.

One point at which difficulty has been encountered relates to the State law requiring that the schools shall offer instructions in household economics, agriculture, and manual training. Through its existing departments the university has been in a position to furnish proper instruction in domestic science and to do something toward training in the manual arts, but it is obviously not properly equipped to offer work in agriculture. Nevertheless, there are on its grounds at all times a large number of young people planning to fit themselves for the work of teaching in the schools of the State where they are likely to be called upon to offer or supervise elementary instruction in agriculture. More pressing has been the need of teachers already in the field who have not had this training, and who, in order to comply with the law, must secure such instruction at the earliest possible moment. Many such teachers can only come during the summer term, and the university has accordingly been put under pressure to furnish instruction in agricultural subjects at that time, whatever it might do during the remainder of the year. It need hardly be said that such work in the nature of the case duplicates to some extent work given at Ames and at Cedar Falls.

Work in psychology has been offered at the State college ever since its foundation. At first the offering of courses was very modest and designed to give a general introductory discipline to such students as might in point of fact be expecting to teach. With the rapid growth of the work in domestic science, and with the increasing emphasis on agricultural instruction in the schools, occasioned by the legislation so often referred to, it has come about that the number of students at any one time on the grounds at Ames expecting to become teachers is very large, running well up into the hundreds. The college has not unnaturally felt that it owed these young people the opportunity to train themselves reasonably for their function as teachers, not only in their subject matter, but also in those accessory branches most directly related to the technique of teaching, two of which, pedagogy and psychology, are actually required by the law. (See Table 6.) In response to these motives, the work in education has been developed very rapidly since 1911; the work in psychology somewhat more slowly, but nevertheless definitely. The program schedules approximately 24 semester hours of education, disregarding practice teaching (6 hours) and research, and 23 hours of psychology, including 2 of ethics; 16 hours of the education work are repeated in the summer, with 4 hours of practice teaching work; 11 hours of psychology are thus repeated. The amount of work so offered is in theory designed simply to comply with the minimum requirements of the law; that is to say, 14 units of education are ostensibly offered and 6 units of psychology. As a matter of fact, appreciably more than this is offered, but under the conditions of election of courses that exist at the State college, it is probably true that no single student would normally find it possible to secure more than the amount called for by law. Evidently this can not be profitably taken all in one term, and if spread out to cover several terms, it almost inevitably results that the total amount offered is in excess of this legal requirement.

In the summer term teachers are coming in increasing numbers, as they are at the State university and at the State Teachers College, to equip themselves to meet the demands for instruction in agriculture, domestic science, and the manual arts. With the facilities available at Ames it is obviously possible to give admirable opportunity for accomplishing this particular purpose. In conjunction, however, with such courses the authorities at Ames have seen fit to offer an appreciable number of other courses covering work in school administration, in the principles of teaching, etc., work which has been most highly developed heretofore at the State university.

It appears, therefore, that as between Iowa State College and the State university there is at present an appreciable overlapping of work in psychology and education. That elementary psychology must be given at both places is apparently agreed upon by all concerned. That the work at the State college may well touch upon educational psychology and some of the more practical of the applied branches of psychology is also not called in question. There appears to be no intention to go further than this, and there is consequently at this juncture no division of opinion as between the authorities at the State college and the State university regarding the appropriate policy to be followed. The more advanced work will continue to be developed and carried on at the State university as in the immediate past. In education, however, while there is again no disposition to question the wisdom and necessity of giving the more rudimentary instruction in education at both places, such for example as courses in the history of education, in general methods, and the like, there is a division of opinion regarding the extent to which work in agricultural education may be properly undertaken at the State university, and regarding the extent to which work in school administration, with special reference to the interests of superintendents and supervisors, may be justifiably developed at the State college.

In view of the very great difficulty in training teachers so that they may comply with the new State law, it seems probable that the resources of all the State institutions will for several years be strained to the limit, especially during the summer term. It is, therefore, very doubtful whether there ought to be any external limitation put upon the facilities offered at the several State institutions for giving work in home economics, agriculture, and manual training until the present force of teachers in the State schools has become satisfactorily equipped to meet these obligations. This may well take several years to accomplish, assuming that in the meantime there is no modification of the law.

It may, however, well be questioned whether, after this service has been substantially rendered, there may not properly be a somewhat rigorous delimitation of the work in psychology and education at the State college such as will prevent the development there of more than that amount of work requisite to meet the requirements of the State law for first-class certificates. It is the understanding of the commission that such a policy is, as stated above, avowedly that of the present administration at the State College of Agriculture and Mechanic Arts. It is, however, equally obvious that, unless some rigid supervision is exercised, the history of other institutions will be repeated and this work will little by little be allowed to grow until it has quite outstripped the original intentions of its founders. Certainly, with the exception of work in agriculture, the more advanced forms of training for teachers and especially for superintendents and supervisors who are to go into the higher branches of work in the State ought chiefly to be provided for at the State university. The facilities for such work are already fairly satisfactory there and can readily be developed into conditions of an entirely adequate kind with a smaller expenditure of time and money and among more congenial academic surroundings than elsewhere in the State.

Such development will require substantial expenditures, but they should unquestionably be made. There is decided need for a proper practice school at the university. As a makeshift the present arrangements may be accepted for a time, but they lack stability, and are imperfect in many essential particulars. The State can hardly justify a policy which involves doing poorly a thing that, if done at all, ought to be done supremely well. No informed person can doubt that this practice teaching work ought to be done, and it is to the interest of every community in the State that it be done in the best possible manner. If in this matter the State is to draw upon, or cooperate with, the school authorities of Iowa City or any other municipality, it should be under conditions that fully safeguard the larger interests of the State by assuring opportunities which both qualitatively and quantitatively are representative and adequate. Otherwise the State ought to rely wholly upon its own resources.

Replying more specifically to the inquiry of the State board of education, the commission feels that, as it has indicated above, a certain limited amount of work in education is justifiable at the State college of agriculture and mechanic arts. The obstacles at present encountered in the execution of any proposition to have teachers who are preparing to give instruction in agriculture take their agricultural work at the State college and their work in education at the State university or the State teachers college are of two main types, the one sentimental and capable of mastery, the other instrinsically educational and much more difficult to eliminate.

In view of the present attitude of mind among the students and the alumni of the State university and the State college of agriculture and mechanic arts, any discussion of migration between these two institutions may be dismissed as purely academic. Speaking broadly, no student will go from one to the other if he can possibly avoid it. Obviously this prejudice is intrinsically perverse and almost morbid, and with a more rational state of the public mind, could not for a moment be countenanced. It does, however, relate vitally to the actual facts in the present situation. Migration from Ames to Cedar Falls would encounter another type of sentimental prejudice, but one perhaps equally deep-seated. There is no material animosity between these two groups of students or between the alumni, but the students and graduates of the State college are not disposed to favor migration to the institution at Cedar Falls. However unjustifiable this attitude may be, it would at least make it difficult to induce students to go to the State teachers college in the necessary numbers to make a solution of the problem based on migration at all satisfactory. Moreover, there are difficulties on the side of inadequate accommodations at the State teachers college, commented upon elsewhere in this report (p. 55), which would render this proposal inadvisable without a very material enlargement of the staff and the plant at Cedar Falls.

The other difficulty concerns the fact that, in order to secure the best results in handling the courses in education, it is desirable that several of them should be given in chronological succession covering appreciable periods of time, so that the student may progress from the more elementary to the more advanced phases of the subject. If a student were to give his entire time for one year or even for one-half of a year to educational subjects alone, it would too largely compress the material and oblige the student to take parallel with one another courses which, to be handled most advantageously, should be given one after the other. Moreover, it is often highly desirable that the student should be carrying other subjects along with his work in education rather than be giving his time exclusively to that topic. These considerations, while not constituting an insuperable obstacle to the proposition to have students migrate from Ames to Iowa City for their work in education, do create a very genuine difficulty which could hardly be altogether removed. Undoubtedly courses in education can be given occupying the entire time for half of a year or all of a year which students could pursue with advantage. But it would be distinctly less desirable than an equal amount of time in such courses spread over a longer total period; e. g., two or three years.

TABLE 6.—*Registrations in psychology and education courses, exclusive of summer sessions.*

Courses.	At the State university.				At the State college at Ames.			
	1912–13	1913–14	1914–15	Total.	1912–13	1913–14	1914–15	Total.
Psychology..........	279	326	408	1,013	271	242	366	879
Education...........	663	689	769	2,121	68	300	435	803
Total..........	942	1,015	1,177	3,134	339	542	801	1,682

SUMMARY OF RECOMMENDATIONS.

1. The imposition of no external limitation upon facilities offered at the three State institutions for giving work in home economics, agriculture, and manual training until the present force of teachers in the State schools is equipped to meet the obligations imposed by the State law.
2. Thereafter the delimitation of work in psychology and education at the State college to the amount requisite to meet the requirements of the first-class State certificate.
3. The provision of better practice facilities at the State university.

Chapter VIII.

HOME ECONOMICS IN THE THREE STATE EDUCATIONAL INSTITUTIONS.

The department of home economics at the Iowa State University was first organized in September, 1913. Its establishment resulted from a prevailing sentiment that all women should find it possible during their college or university years to secure such instruction in the household sciences and such training in the technique of household arts as will enable them to administer their own households efficiently and to care for the physical, mental, and moral well-being of the inmates thereof.

The Iowa State College of Agriculture and Mechanic Arts was a pioneer institution in the introduction of home economics courses into college curricula, the first work in this subject having been offered in 1869. The authorities in control of the institution at that time considered the instruction of women in the arts and sciences related to homemaking as in harmony with the spirit of the Morrill Act. The Federal Government, through the Department of Agriculture, has since given recognition to home economics as a legitimate line of instruction in land-grant colleges.

The courses in home economics in the Iowa State Teachers College have been arranged to meet the need in the State for teachers of these subjects in rural and elementary schools. The importance of this department in the Iowa State Teachers College has been greatly increased since the enactment into law of a requirement that domestic science be taught in all rural schools, which necessitates the equipment of 12,000 rural teachers with some knowledge of this subject.

Bearing in mind the reasons for the development of these various courses, the commission undertook to study the present status of home economics and to reach a conclusion as to the position it should occupy at each institution.

The department of home economics in the university is housed in one of the older buildings on the campus, but such alterations have been made as to convert this structure into an entirely sanitary, excellently lighted series of offices, classrooms, and laboratories. The equipment provided for teaching the various lines included under "foods," "dietetics," "clothing," and "textiles" is of most admirable type and so plentiful that no additional purchase of similar equipment will be needed for several years, even should the enrollment in the department be doubled. However, the consensus of opinion among home economics teachers is that household administration cannot be most effectively taught without a residence of some sort for use as a practice house. Since the department is otherwise so well equipped, it seems especially desirable that it should not be handicapped by the lack of this piece of apparatus. The initial expense is comparatively small and the cost of maintenance inconsiderable. Such expenditure is in the commission's judgment legitimate. The teaching force of the department is adequate and could easily care for an increase of 30 per cent in the number of students.

In view of reasons elsewhere set forth in this report, the commission considers it unwise to develop at the State university courses in home economics leading to degrees. The proper function of the department in the scheme of university instruction should be that of a service department. Because of both its practical and its cultural value, the continuance of home economics on this basis is amply justified in any institution frequented by women. That courses in the subject not only afford useful training in the arts and sciences involved in the maintenance of efficient homes, but that their content tends to broaden and humanize the experience of women students is commonly recognized. A certain amount of duplication in the fundamental lines of home economics teaching between the university and the State college is naturally unavoidable, as in the case of English and mathematics and other subjects generally held to be indispensable in both liberal and technical curricula. Unwarranted duplication can be prevented if the university department is kept from expanding beyond the limits of a service department.

Having regard to the definite differentiation of the university department from the department at the State college, where home economics constitutes one of the major lines of work, the development of courses for the training of high-school teachers of home economics should not be encouraged at the university. But there is another field which the university department, as it expands, may enter legitimately and consistently with the principles here enunciated. It may contribute to the training of hospital dietitians. The conjunction at the university of a department of home economics with a hospital and a medical school of the first rank presents an unusual opportunity for the development of this type of instruction. Although the demand for trained women as prescribing dietitians is new, it will apparently soon be considerable. If the State desires to create such courses, they should be connected with the home economics department at the university. This is not to be understood, however, as implying a recognition of professional courses in home economics at the university.

The department of home economics, established in the Iowa State College of Agriculture and Mechanic Arts in 1869, was recognized as a separate division in 1913. This division includes not only the usual household economics subjects, but also the department of physical training for women. The arrangement is most admirable and fortunate in this particular institution, where practically all women students are enrolled in the home economics courses.

The division of home economics has overflowed the recently constructed fireproof building and now uses four rooms in the chemistry building. A new and adequate building is an approaching necessity and should be so constructed that a woman's gymnasium may be included in it.

The teaching of home economics in the State College of Agriculture and Mechanic Arts has followed well-defined lines. It has been planned primarily to train the college women to perform household tasks dexterously and to understand the scientific principles underlying these tasks, and it has prepared many women for teaching and directive positions. More recently there has been organized a strong technical course for women not desirous of receiving a college degree.

There are certain directions in which the division of home economics may be developed logically and consistently with the principles already emphasized in this report. The State board may appropriately encourage the enlargement at the State college of facilities for preparing women for various positions of responsibility in dormitories, tea rooms, hospitals, and cafeterias. To this end it seems desirable that the college cafeteria be placed under the charge of the home economics division, and as far as possible used as a practice place. The training of hospital dietitians, however, appears, in view of the considerations already mentioned, to be more fittingly the function of the university department of home economics in conjunction with the university hospital. The commission recommends that effective cooperation between the home economics division and the authorities in charge of women's dormitories be established. In addition to training high-school teachers of home economics, a task to which the State college is already committed, the institution may well respond to the growing demand for the preparation of teachers of this subject for trade and industrial schools.

The rooms set apart for instruction in home economics at the Iowa State teachers college are located in portions of three widely separated buildings and even in different parts of the city. One food laboratory is in an inconvenient basement room. In the two sewing rooms, which are on the second floor of an old building, the lighting is so poor that artificial illumination must be depended upon during most of the day. With the completion of the new building now under construction, the food laboratory conditions will be somewhat improved. In other respects the housing of the department will still be very unsatisfactory. Two full years in home economics are offered in the degree courses and the diploma courses. In the rural teacher-training course the work covers two terms. In compliance with statutory provision a 12 weeks' course is also maintained.

There are certain fundamental weaknesses in the organization of the department of home economics at the Iowa State Teachers College which prevent the highest efficiency in teaching. The professor in charge of the work in the degree and diploma courses does not oversee either the instruction offered in the rural teacher-training course and in the practice school or the classwork in home economics at study centers held in different parts of the State. That a subject or group of related subjects should be taught in any one institution by three separate and noncooperative groups of teachers is a more regrettable condition than a possible overlapping of similar work in three widely separated institutions. Such lack of departmental coordination can hardly fail to lead to divergent methods of teaching and to unequal stress upon different phases of the subject.

Almost equally unfortunate is, in the commission's judgment, the use of home economics classes in the rural teacher-training courses as practice classes for home economics students in the diploma courses. Rural teachers are required by law to prepare themselves to teach domestic science. There is at least an implicit obligation laid upon the State to furnish at the State training school appropriate facilities for this preparation. In view also of the commanding importance of their future work, these rural teachers should not be subjected to experimentation during the all-too-brief period of their professional training.

As indicated in other parts of this report, teachers carrying 20 hours of college teaching a week with full classes should not be allowed to serve in study centers on Saturdays, unless this added burden is offset by release from some of their intramural work.

The commission recommends the reorganization of the work in home economics at the State teachers college through the appointment of one well-trained woman as head of the department, who shall have the direction of all the teaching in home economics subjects done on the campus, in near-by practice schools, and in the study centers maintained throughout the State. She should be paid a salary comparable with those paid to other department heads.[1]

SUMMARY OF RECOMMENDATIONS.

1. The development at the Iowa State University of home economics as a service department along lines that will make it of greatest value to students majoring in other courses of study.
2. The avoidance by the university of courses that duplicate the work offered at the State College of Agriculture and Mechanic Arts in the preparation of high-school teachers.
3. The establishment at the university of special lines of work for the training of hospital dietitians.
4. The provision in the near future of enlarged accommodations for the department of home economics at the State College of Agriculture and Mechanic Arts.
5. The provision of opportunities for preparation in institutional and cafeterial management at the State college.
6. The provision of special courses for the preparation of trade and industrial school teachers at the State College of Agriculture.
7. The improvement of the accommodations provided for work in home economics at the Iowa State Teachers' College.
8. The reorganization of the work at the teachers college under a single head.

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[1] The salaries at present paid to home economics teachers at the State teachers college are also too low to enable the institution to compete in the open market for the best teachers. For a comparison with those paid at Ames and Iowa City see appendix, pp. 166, 171, 188.

Chapter IX.

SUBCOLLEGIATE WORK.

In the light of facts presented elsewhere in the report, notably in Chapters II and III, the commission has ventured to make a somewhat careful study of subcollegiate work, and submits herewith its conclusions. Two of the three institutions visited by the commission carry on subcollegiate work on a more or less extensive scale.

At the Iowa State Teachers College, in 1914–15, the general normal diploma course showed 45 men and 219 women registered, and the rural normal diploma course 109 men and 482 women. These, including a few miscellaneous registrations, made a total in these courses of 865 students. The requirements for admission to the normal diploma courses are "on the basis of the rural school diploma" or the first-grade uniform county certificate; the instruction is confined mainly to the subjects required for securing a uniform county certificate or the normal diploma and second-grade State certificate. The need for some pedagogical training for all teachers in the rural and grade schools is urgent in every State in the Union. The public-school system in the State of Iowa needs annually some three thousand new teachers, many of whom will, as a matter of fact, enter their work without any school training in pedagogy. The effort on the part of the State teachers college to meet these demands by offering these subcollegiate courses is to be commended, as an essential part of the service of this great institution. In view of the fact that no other normal schools exist in the State, and the further fact that the training given in the normal courses in selected high schools is at best superficial and incidental to other purposes of the high schools, the commission believes that a still larger proportion of the energies of the State teachers college might profitably be devoted to the subcollegiate work, both in the regular session and in the summer session until such time as the State shall respond to the need for better training for all the teachers in its public schools and especially those in the rural schools. There is little danger that the development of this work, which is so directly accordant with the original purpose of the institution, will be overemphasized, or that it will bring the institution into unfair competition with the standard secondary schools. A distinct advantage of these courses, as given in the State teachers college, especially the vocational normal course and the rural teachers course, is found in the opportunity for practice teaching, for example in the demonstration rural schools maintained by the teachers college, under conditions approximating those which the student will afterwards meet in her independent teaching. But, although these courses meet an urgent present need, one which will undoubtedly continue to be felt for some years, the State teachers college should, as soon as possible, extend its courses for the training of elementary school teachers, and should require high-school graduation for entrance to them.[1]

The noncollegiate work at the Iowa State College is comparatively recent in its present form. The institution formerly combined secondary, vocational, and college work, but in 1910 it ceased to announce an academic curriculum enforcing the usual requirements of 15 units for admission. Beginning in 1911, it again announced an agricultural short course "of lower grade" than collegiate. "Noncollegiate work" as a title was resumed in 1912, and the college now spends about $54,000 per year for this purpose. Since this is a special grant by an act of the legislature, it can not be said that the noncollegiate work is making direct drafts upon the regular income of the college. The fluctuation or experimentation in these noncollegiate and short courses is shown in its general features in the accompanying tabulation.

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[1] See Chapter III, p. 55.

TABLE 7.—*Courses in the Iowa State College—Registration.*

Catalogue of—	Designation of courses.	Organization of short courses or noncollegiate.	Registration.			
			Year.	Academic or noncollegiate.	Short course.	Special.
1908-9	Academic		1907-8	232		221.
1909-10	Academic; junior college, including academic, freshman, and sophomore classes.	Certain students over 20 years of age admitted "without examination" if they had "satisfactory preparation." Two-year course in mining engineering; clay working; 1-year course in poultry husbandry.	1908-9	271		157.
1910-11	Junior college, including freshman and sophomore years.	Two-year course in mining engineering, clay working, and agriculture; 1-year course in poultry husbandry and dairying.	1909-10			75 unclassified, 119 in music.
1911-12		Agricultural short course, "lower grade than collegiate"; 2-year course in clay working and agriculture; 1-year course in poultry husbandry and dairying.	1910-11		149	141 in music.
1912-13	Noncollegiate	Agricultural short course (noncollegiate); students must be 17 years of age and have completed eighth grade; 2-year course in agriculture; 1-year course in dairying; 1-year course in poultry husbandry; faculty—president and deans, 1 associate professor, 3 assistant professors, 13 instructors.	1911-12	188 in agriculture.		
1913-14	do	Short course (same as in 1912-13); 2-year course in agriculture; 2-year home-maker's course; 2-year course in engineering (in trade-school work); 1-year course in poultry husbandry; 1-year course in dairying.	1912-13	218 in agriculture, 121 in music.		19 in agriculture.
1914-15	do	Students must be 17 years of age and have completed eighth grade; 2-year course in agriculture; 2-year course in engineering (vocational course); 2-year course in home economics; 1-year course in dairying.	1913-14	275 in agriculture, 22 in engineering, 24 in home economics; total, 321.		
1915-16	Noncollegiate (see 1914-15).	Faculty: President and deans, 4 professors, 3 associate professors, 4 assistant professors, 21 instructors, 1 assistant.	1914-15	249 in agriculture, 65 in engineering, 51 in home making; total, 365; 154 in music (of whom 92 are duplicates).		14 in agriculture, 6 in engineering, 4 in home making, 9 in industry.

Noncollegiate work is now offered in the following "two-year courses or curricula: Agriculture; home economics; vocational courses in engineering for electrical workers and stationary engineers, mechanical draftsmen and mechanicians, structural draftsmen and building superintendents, surveyors and road makers; and a one-year course in dairying." For admission, a student must be at least 17 years of age and must present a certificate showing the completion of the eighth grade. High-school graduates, or students able to present 14 units, are not eligible to the noncollegiate course, with the exception of the one-year dairying course. Other students who have completed less than 14 units of acceptable high-school or academic work may secure some entrance credits, perhaps as many as 5 units of high-school work, through these noncollegiate courses, though the courses are not intended to prepare for the satisfaction of entrance requirements. One instructor reported that the majority of his students had had some high-school work, and a few almost four years of such work. This noncollegiate work should not be confused with the two-year college course in agriculture, for entrance to which students must present the same requirements as for the four-year collegiate course. As will be noted in the table, the enrollment for 1914–15 showed 249 noncollegiate students in the division of agriculture, 65 in engineering, 51 in home economics, 154 in industrial science (chiefly local students taking music).[1] The total of noncollegiate students, therefore, excluding music students, is about 365.

Instruction for noncollegiate students is given by 32 departments, corresponding approximately to those of the regular collegiate divisions. They include mechanical engineering, structure design, veterinary medicine, psychology, and bacteriology, as well as the agricultural subjects. Much of the instruction is given in the same laboratories, and in a very few cases by the same instructors as in the college proper. The faculty of the noncollegiate section consists of the president, the deans of agriculture, engineering, home economics, industrial science, and veterinary medicine, and 4 professors, 3 associate professors, and 4 assistant professors doing noncollegiate work. Besides these there are 21 instructors, 5 of whom appear to have no college degrees. With regard to the character of the instruction offered, an instructor in animal husbandry, for example, said that he gave to noncollegiate students substantially the same lecture and laboratory work as were given to collegiate students, but gave it more slowly. It was his judgment that most of the students in his classes could do the college work. While the noncollegiate teaching staff is kept fairly well separated from that of the college proper, the 365 noncollegiate students create as real a pressure upon the space and facilities of the institution as would approximately the same number of collegiate students. In a statement to the commission, the president of the institution declared that the college needed a building for the work of the noncollegiate section and that it ought to develop that work in engineering and home economics, as well as agriculture, though he said that the State had not thus far responded to the arguments for this development.

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[1] Music is listed as one of the subjects in the division of industrial science; see p. 70.

The commission is not much impressed by the arguments urged for the existence and development of this noncollegiate work by the State college. These are, in brief, that the college has to give it; that it thus takes care of "fine young men and women, not graduated from the high school, who have finished the eighth grade but want a little intensive, practical instruction"; that these students should have the same chance as other students, though they are not prepared for the college work, which is the main work of the institution. All these arguments could be urged about as strongly for other and perhaps lower grades of instruction by the college. The students who are ill-prepared for the regular work of the institution will probably always be a problem. Granting that the obligation to care for these students is laid upon the State, it does not follow that the work should be undertaken by an institution of collegiate standing as an appendix, or distraction. The State has once decided wisely, as the commission believes, not to mix secondary, collegiate, graduate, and research work at the State college. The commission therefore recommends that the State college give up for a second time all noncollegiate instruction (except limited short courses in winter or in summer for special groups of students), and give it up at the earliest possible date. This date should be announced in advance, so that adequate provision could be made by the State for the groups of students now represented in the noncollegiate courses. The State college would thus be free to discharge still better the large and increasingly heavy obligations which will inevitably tax to the limit all the resources the State will put at its disposal as a college of agriculture and mechanic arts. The commission is convinced that in the long run the money devoted to noncollegiate instruction will be practically a deduction from the total revenues that will be devoted to the institution by the legislature. In this conviction the commission is supported by the statement of so distinguished an authority as Dean Eugene Davenport, of the college of agriculture of the University of Illinois, who writes:

> Even though special funds may at first be provided for the handling of such a group of students in an institution doing collegiate work, yet the time is bound to come, as the numbers increase and as the demands upon the institution multiply, when this group of students thus introduced will result in definite subtraction from the work which an institution may do of a strictly collegiate grade whether we are to regard the space required, the teaching power of the faculty, or the funds which may be provided for the institution.

Much more elaborate provision than at present needs to be made for the class of students now cared for by the noncollegiate courses of the State college. Furthermore, these provisions should be distributed about the State rather than centralized as a side issue or in the proper work of the State college. The field should be inoculated at many points, not at one only. The State is already subsidizing high schools to undertake special forms of secondary work, such as agriculture, home economics, and normal training. Instead of creating separate agricultural schools the commission urges the subsidizing of strong, progressive, strategically located high schools, which shall develop special vocationalized courses for the class of students under consideration. The State may well go to the extent of providing special local buildings (perhaps including dormitories) and farm tracts for the schools in question. Courses in these schools should not be those of the ordinary high school, but should be courses particularly adapted for the students who would not, under the usual conditions, return to the high school. The commission recommends that all work of this character should be under the general supervision of the State college. To put it in other words, this group of strong high schools, whether consolidated, or county, or union high schools, would perform for several thousand students the services which the State college now performs for a few hundred, many centers of impulse would take the place of one, and the directive, inspiring leadership of the State college would operate widely through permanent schools linked closely with many rural communities as well as through occasional extension groups.

SUMMARY OF RECOMMENDATIONS.

1. The continuance of subcollegiate work at the State teachers college.
2. As soon as other provision can be made, the abandonment by the State college of agriculture and mechanic arts of all noncollegiate work, except for limited short courses, in winter or in summer, for special groups of students.

Chapter X.

COURSES IN JOURNALISM.

The commission has investigated the matter of journalism, which was referred to in the memorandum submitted by the State board. It finds that some courses in journalism are offered at both the State university and the State college, but that there is, at present, no endeavor at either place to establish a school, or college, of journalism. As will appear in the following paragraphs, the commission does not regard the establishment of such a school or college as at present desirable.

The work at the Iowa State University is confined to one 3-hour course running through the year, offered in the department of English. It is given under the title "The Newspaper," and discusses the principles and practice of journalism. It consists of lectures, the writing of "newspaper stories," articles, etc., with laboratory or practice work done upon the college paper, "The Daily Iowan," which is under the exclusive editorial direction of the instructor in this course. The establishment of this course, and its relation to the university paper, which is in reality a purely private enterprise, absolutely owned by one or two men, have a twofold purpose: First, to give some general instruction in the elements of news writing for students looking toward newspaper work as a profession; second, to secure the control of the college daily, whose conduct some of the faculty had looked upon as not creditable to the university. This control was so desirable, in the judgment of the department of English and the university authorities, as to warrant the payment of a salary of $1,900 to the instructor, who gives only the one 3-hour course in the department, and devotes the rest of his time to the editing of the college paper and to publicity work for the university. Granting that the instructor appointed to the place is unusually capable and experienced, it is still a question whether it was wise to make such an outright addition to the budget of the department of English, which is already strained to meet the demands of undergraduate instruction, and which has scarcely begun to develop graduate work. The editorial and reportorial work on the college paper is conducted by the instructor and the members of his class; the advertising and financial part of the business of the paper is controlled entirely by the owners. Twenty-three students are taking the course in 1915–16. The student body of the university is said to be satisfied with the present arrangement for conducting the university paper, an arrangement which was characterized by a member of the faculty as "not a system, but a man."

This course does not commit the university to any formal development of a curriculum in journalism, leading to a degree, though such may be the outcome of this beginning. Probably another year will see an additional course offered, under substantially the same conditions. The university authorities have not been convinced, however, that there is a strong demand for college-trained journalists. This opinion was more or less confirmed by the responses received by the commission to a questionnaire sent out to all the publishers of periodicals in the State. The publishers were asked to state how many persons were employed in their editorial and business departments, excluding compositors, etc., how many of these were college graduates, how many were graduates of institutions in Iowa, and, lastly, whether there was, in their judgment, a large and growing demand for college-trained men, comparable to the growing demand for men similarly trained for the professions of law and engineering.[1] Replies were received from 320 newspapers or periodicals. Of these, 200 replied to the last question in the affirmative, but only 49 supported their answers with any comment or argument; 94 answered in the negative; of these, 27 added comment; 20 failed to answer the last question, and 6 were noncommittal. The larger newspapers of the State were about evenly divided in their opinions as to the demand for college-trained men. The same is true also of the special journals like those dealing with agricultural matters.

The work in journalism at the State college is announced under the somewhat inapt title of "agricultural journalism." It is in reality a group of brief courses in technical journalism, under the direction of a professor who gives part of his time, an assistant professor, and student assistants. Nine courses are offered, involving a total of 15 hours. There are three general courses of one hour each, and three groups of two-hour courses dealing with the special application of journalistic practice to agriculture, engineering, and home economics, and three separate two-hour practice courses corresponding to each of these divisions. Two courses, in "Newspaper management" and "Management of a technical journal," one hour each, are given in connection with the actual making of the "Iowa Agriculturist." They follow the two-hour courses in "Beginning Technical Journalism." The department of agricultural journalism now includes also home economics journalism (since 1911) and engineering journalism. The department was established in 1905 through the grant of $1,000 annually by Mr. John Clay, of Chicago, whose subsidy has continued to the present time.

The commission commends the form of instruction attempted here, since it gives a sensibly limited opportunity to students to acquire facility in writing technical paragraphs and articles for specialized periodicals. Any considerable enlargement of the present offerings of the department would, in the judgment of the commission, be open to objection.

SUMMARY OF RECOMMENDATIONS.

The approval of the work in journalism now offered at the Iowa State University and the Iowa State College of Agriculture and Mechanic Arts and the limitation of it to approximately its present scope.

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[1] For this letter see Appendix, p. 155.

Chapter XI.

COURSES IN COMMERCE OR A SCHOOL OF COMMERCE.

The State University of Iowa has for a good many years had strong courses in political economy, political science, and sociology, and for a time announced these as a school of political and social science and commerce. Its aim was stated to be: "To give a complete general view of all the political and social sciences, to foster their development, to assist in preparation for the various forms of public and social service, and to provide training for the wider avenues of business." In its faculty were included professors of history, law, and medicine.

In 1915 an effort was made to secure from the legislature a special appropriation for a school of commerce, which was to supplement, even to supplant, the organization just mentioned. In support of this proposal to develop a separate school or college of commerce, a brief was submitted to the legislative committee. This document, which the commission has before it, may be taken as the strongest presentation which could be made in favor of the proposed school of commerce. As a proof that there is an unmistakable demand for college graduates trained for business, social, and public service, it is asserted that one-fourth of the living male graduates of the college of liberal arts of the university are engaged in business, and that the percentage increases with each graduating class. According to the estimate of the registrar, 50 per cent of the men in this college will go into business. In the departments of this college the university had 1,200 registrations. The large number of letters received by the university commending the efforts of the extension division to serve the business interests of the State, which call upon the university for graduates competent to fill business, governmental, and social-service positions, and the demand for teachers of commercial subjects are likewise adduced in support of the proposal to erect a school of commerce. The brief cites the success and popularity of schools of commerce in such institutions as Harvard, Pennsylvania, New York, Illinois, Northwestern, and Chicago. It points out the increasing recognition of the fact that business men, like lawyers and engineers, must be thoroughly grounded in the principles underlying their work and instructed in the most up-to-date organizational practices. Attention is also called to the importance of furnishing those who would enter the industrial and social fields of the State with as good an equipment for service as is offered to those who would develop agricultural interests. For the support of this proposed school a considerable sum of money was asked, which should be comparable with the annual budgets of similar schools at the University of Illinois (about $34,000) and at Northwestern University (about $57,000).

The commission points out in this connection that the school or college of commerce in such institutions as Harvard and Illinois includes in its organization the department of economics, which is quite as much a service department for all the liberal arts curricula as it is a technical department for the college of commerce.

While the legislature did not make the appropriation asked for, the university appointed a new man to the professorship of political economy, sociology, and commerce, to take up most of the work relinquished by Prof. Loos, and to develop it with especial reference to the demands just mentioned. The commission has examined a schedule of the proposed courses for 1916–17, which indicates the desires of the department under its present leadership and the direction in which it would like to develop. A part of such a plan of development would be the addition of at least one full-time man for 1916–17 to take the place of a part-time man, to conduct theoretical courses, and the addition of two or three men in 1917–18 for the elaboration of courses in salesmanship, advertising, accountancy, commercial teaching, and the like. The total number of registrations for 1914–15 was 722, representing 475 persons. The corresponding figures for 1915–16 (November) were 860 and 560.

Before undertaking to formulate an opinion, the commission has also consulted persons outside the university and outside the State college who are intimately acquainted with conditions in Iowa. It appears to the commission that there is not a close parallel between the obligation of the university and that of such institutions as Harvard University, New York University, Northwestern University, and the University of Illinois, all of which draw very large numbers of students from great urban communities. Iowa is essentially a State devoted to agriculture and retail business, with many cities of medium size, but no great cities having highly complex business organization and continent-wide or international relations. While the commercial and industrial development of the State will perhaps go on rapidly, the probability of a sharp intensification of the demand for men trained in narrowly specialized courses in commerce is not very convincing as an argument for elaborate specialization in the curriculum of the university.

If a college or school of commerce were to be developed in Iowa, it obviously would belong in the university, where it would receive the best form of reenforcement in the allied subjects of history, political science, mathematics, modern languages, and psychology. The commission, however, is unconvinced that the university or the State would be warranted at the present time in proceeding to create and develop a separate college or school of commerce in the university and recommends that the present movement be confined to a moderate expansion and better correlation of the courses now offered in different departments of the university, which would furnish the sort of training and develop the sort of interest which a progressive and ambitious business man should have. The three curricula proposed by the department—"Business course," "Secretarial course," and "Commercial teachers' course"—each leading to the degree of bachelor of arts in commerce, appear to be not much more than a broad liberal arts course, with a major in economics somewhat expanded. A college built upon this model would be a single-department college, most of whose work would be done in other colleges and departments. If accounting and economics were separated, it would make two departments at most. In the outline of "proposed courses" for 1916–17, the instructor in accounting is put down for 12 courses totaling 28 hours, and running into such refinements of the subject as "accounting for pharmacists." Under the heading of "Economics and business" are announced also courses in "immigration," "social statistics," "vital statistics," "business English," and "principles of persuasion and conviction." There is undoubtedly a tendency among the universities of the country to extend quite considerably those courses specially designed to interest students who are to go into business. Some persons even go so far as to claim that curricula for this purpose should be designed so as to make them quite as professional as courses in engineering, law, or medicine. The time may come when these curricula composed of courses in close sequence, leading to the preparation of technical experts in business, will be developed, but such curricula would be rather in the nature of graduate courses like those offered at Harvard University and Dartmouth College, than undergraduate courses made up in large part of courses in liberal arts and sciences.

Many advocates of improved training for engineers have, in recent years, swung away from the highly technical prescribed curricula toward a curriculum containing a larger amount of liberalizing material, or perhaps even to the requirement of one or two years of liberal arts and science work as the preparation for technological or engineering work, in the same way that one year of liberal arts work—sometimes two—is prescribed for admission to a standard medical or law school. When preparation for business is ordained in a similar manner upon a professional basis, it will be important to create a separate college organization and to back it with liberal funds for men and equipment. The expense of such a college will be great, owing to the fact that the university, in making appointments to its teaching staff, will have to compete in the business market for men of special talent and success. Twelve thousand dollars, which has been suggested as the sum that could be better put into business courses than anywhere else in the university, would be little more than a respectable beginning. Such men will be in great demand and will command salaries, as a rule, quite beyond the ordinary university salary. If the university is to develop a college of commerce for the training of leaders and experts in business organization and enterprise, it can not afford to man its departments with mediocre men. The best men must be paid high salaries, salaries determined by the commercial or industrial market, and not by the educational market alone. In the long run, however, it will be economical to secure such men.

The commission urges one other reason for caution in the development of a distinct collegiate organization in commerce and business. The business and commercial interests of the State must demonstrate a permanent and cumulative demand for men who have had a professional or semiprofessional business training, similar to the demand recently generated among the agricultural interests, before the university will be warranted in proceeding beyond a strong departmental organization in economics, accounting, and commerce. When such a demand is demonstrated, and a commanding group of experts has been gathered together in the university, efficient service may be rendered to the State through investigation of commercial and industrial problems and practices, through extension courses, and through short courses offered at the university itself.

SUMMARY OF RECOMMENDATIONS.

The moderate expansion and better correlation of courses now offered in various departments of the Iowa State University rather than the creation of a separate college of commerce.

Chapter XII.

A STUDY OF THE USE OF BUILDINGS AT THE IOWA STATE INSTITUTIONS.

A considerable portion of the State board's memorandum related to the building policy of the State at the three institutions. It requested the investigators to consider this policy with care, to study thoroughly the use of building space at each of the institutions, and finally to give definite advice as to the erection of a new building at the State university to take care of the departments of botany and geology. The commission has gone into these questions as carefully as the time and the money allotted to the survey would permit and submits this statement, which it hopes may be of value to the institutional authorities not only in determining the building program for the next biennium, but also in future estimates of the use of space.

It should be noted that all percentages, ratios, and other analyses given in this chapter or in the appendix are absolutely dependent upon the accuracy and completeness of the information submitted by the authorities at the State university, the State teachers college, and the State college of agriculture and mechanic arts for their respective institutions. The original data from which these results have been obtained are on file in the office of the Bureau of Education at Washington. Every effort possible under the limitations of time and finance has been made to correct discrepancies in the data received and to verify all calculations that are part of this report.

In considering the effective use of the floor space of any educational institution certain fundamental facts must be kept in mind. It should be fully recognized and appreciated at the outset that the ideal of the engineer—full utilization of a plant's facilities, so that every foot of plant is productive, leads to production, or, as unproductive, serves to aid production—is not only impracticable, but in fact impossible as a standard of measurement for academic operations. Teaching is not production in the ordinary sense and is subject to many factors and variants not encountered in industry. Laboratory equipment, for instance, must necessarily be highly specialized for the work of its science, whether natural or applied, and beyond its employment by that science in the process of instruction (in turn governed by unique considerations of brain fatigue, working light, and like expediencies) such "plant machinery" must perforce lie idle. Further, the human factor is not an operating factor producing material goods, but is concerned with teaching or with research; either with the transference of the vital thought from the mind of the teacher to the mind of the scholar, or with pushing outward the boundaries of knowledge through research.

Largely owing, however, to the very fact that the product of academic institutions is difficult to measure quantitatively, avoidable wastes have crept in in certain places, unnoticed by the faculties absorbed in the carrying on of their teaching and research pursuits. The figures and analyses given here indicate some of these overlooked wastes at the Iowa State institutions.

This study involves only actual conditions that are definitely expressible in the form of the number of square feet of floor space, the number of students, or the number of hours. Theories of construction and of use are purposely avoided, except in so far as the facts are interpreted for the special benefit and at the special request of the building committee of the board of education.

The total floor space of any building used for industrial purposes is composed of productive and unproductive space. Owing to the possible ambiguity of these terms when applied to buildings used for academic purposes, the terms "instructional" and "accessory" will be used in this report. Teaching space is obviously instructional space; all other space, so far as the present purpose is concerned, is accessory, or, in some exceptional cases, a "combination" of instructional and accessory elements. The combination space set forth in the tables is used for purposes peculiar to the method of instruction or the construction of the building. In industry, as already indicated, productive space is most valuable when so designed and utilized as to give maximum opportunity for production. Unproductive space is most valuable when the maximum amount of it effectively serves the ends of productive space.

Instructional space, as the term is employed here, means that space used for the primary function of the institution—teaching—and is distinguished by the presence of a student or group of students for purposes of instruction. Under this head fall—

1. *Classrooms*, or space suitable for recitations or lectures in any course, regardless of content, where working apparatus is not required.

2. *Laboratories*, or space having individual equipment so specialized to a particular purpose that each student is enabled to pursue his task irrespective, in general, of the progress of others in the room at the same time.

3. *Mixed space*, where existing in a few cases, is simply an inseparable combination of classroom and laboratory elements. It should not be confused with "combination" space, defined above as a mixture of instructional and accessory space. For instance, an equipped laboratory in which some spasmodic recitations may occur does not, for present purposes, lose its essential laboratory character by such use unless the authorities have plainly indicated on the floor plans or rosters that it is a mixed room.

Accessory space, although not used specifically for teaching purposes, is to a large degree essential to the plant because of the physical features of building construction and the needs of the administrative functions. Waste or efficient use may equally well occur in instructional or in accessory space. Accessory space is classified into—

1. *Administration*, which includes all offices; storage and supply rooms; repair shops, tool rooms, and janitors' rooms; official reception rooms; vaults; document rooms; power plants and substations; battery rooms; private research laboratories, when same are not for purposes of student instruction; and the like.

2. *Other accessory space*, which groups all space, both necessarily and unnecessarily accessory, not otherwise classified, such as museums, libraries, and reading rooms, exhibit and display rooms (when separate from teaching space); locker, dressing, and rest rooms; halls and corridors; stairs and elevator shafts; dead floors; space used by interests outside the institution proper (State highway commission

at Ames and Y. W. C. A. at Cedar Falls); lunch rooms and literary society rooms; and the like.

Two other definitions are necessary to an understanding of the facts presented below. Instructional space is further classified as—

1. *Scheduled space*, i. e., that for which the commission has received a statement of definite student capacities and definite hours of actual use for teaching purposes, and

2. *Unscheduled space*, i. e., that teaching space for which either the capacity, or the hours of use, or both, were not furnished in response to the request for such data.

Accessory space, of its own nature, is "unscheduled."

The purpose of the statement of these subdivisions is to narrow down the inquiry to a manageable scope which will focus all available facts on the particular question asked by the board of education, viz: "Is the space provided for classroom, laboratory, and office purposes being economically used?"

METHOD OF INVESTIGATION.

Ten principal buildings were selected at the State University, eight at the State Teachers College, and ten at the State College of Agriculture and Mechanic Arts for detailed study as most normal and typical of the respective institutions and most nearly comparable as between the institutions. The new chemistry building at Ames could not be considered because of its incomplete equipment.

The analysis of the facts gained from a study of these buildings was further concentrated on the "scheduled" teaching or instructional space, which, as defined above, is that space used regularly each week by a definite number of students at definite hours, and for which the occupancy and time ratios explained later may be calculated. The "unscheduled" instructional space and the accessory space may be compared as to relative quantity, but not as to whether utilization is effective. On the basis of such principles, the commission can not say, after an examination of the floor plans and a broad observation of the three institutions, that a certain office is or is not used effectively. It can only indicate, on the basis of the data obtained, how much the instructional space is used and how the three institutions compare, leaving the determination to the board of education and to the institution in question as to whether or not that quantity is or is not effective utilization. By reducing these comparisons to a percentage basis it is not intended to fix 100 per cent or any other standard of effective academic use; 100 per cent utilization is wholly impossible in any educational institution. The figures showing the proportions of scheduled to all instructional space, of scheduled to total, of instructional to total, and of accessory to total, at the three institutions on the same basis of classification, appear in the appended tables.

Two methods might have been employed—the method of averages and the composite method.[1] The method of averages used throughout this investigation to determine the facts is given here in full as applied to the average use of the classrooms at the State University of Iowa.

By the method of averages it is found that 49.53 per cent of the *actual* capacity of classrooms at the State University of Iowa is used 37.13 per cent of the time, or an average use of 18.39 per cent.

The relation of the capacity of each room to its theoretical maximum capacity, or the increased utilization which would result from changes in seating arrangements and the like, depend so largely upon the policy of the institution (and in the case of the laboratories, upon the content of courses) that they at once involve elements outside this report.

Explanation of the occupancy ratio " O."—The percentage of the classrooms' actual capacity actually occupied is given the title " Occupancy " (O). The occupancy (O) equals 49.53 per cent for the classrooms of the State university. The method of obtaining the ratio " O " is as follows:

The maximum occupancy for any room (the maximum number of students regularly in the room at any period of the week), plus the minimum occupancy, divided by 2, equals the average occupancy. The average occupancy, divided by the number of working units (capacity) of the classroom reported by the authorities, equals occupancy ratio " O " for the given room. To obtain the occupancy ratio " O " for the classrooms in any given building, obtain the sum of the occupancy ratio " O's " for all classrooms and divide by the number of classrooms regularly scheduled in such building; this equals the classroom " O " for the building. To obtain the occupancy ratio " O " for a group of buildings, the sum of the classroom " O " ratios for the buildings having scheduled classroom space, divided by the number of such buildings, equals the " O " of the plant's classrooms, or, in the case cited, 49.53 per cent.[2]

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[1] By the Composite Method is meant—

(*a*) The assumption that all classrooms in a given building are as one classroom, all laboratories as one laboratory, etc.;

(*b*) The combination of the individual room occupancies, capacities, periods used, and periods in week (number of rooms multiplied by 44) to find the " O," " T," and " OT " for the composite classroom, laboratory, and mixed space; and

(*c*) The further combination of the class, laboratory, and mixed ratios to yield the " OT " ratio for the plant, which would be—

$$\frac{\text{Total occupancy} \times \text{total periods used}}{\text{Total capacity} \times \text{total periods in week (Number of rooms} \times 44)} = \text{" OT "}$$

In view of the fact that the method of averages better serves the purpose of this analysis, the composite method is, in the opinion of the Commission, one of purely mathematical interest. To avoid confusion, the elements just outlined are not developed further in this report.

[2] Together with each such calculation of occupancy as that given above should exist a note showing the area and the relation of capacity to area, or the number of square feet for each working unit.

"Plant," wherever used here, means the buildings selected as listed in the tables. The following numerical example may serve to show the method still more clearly:

Example: Room 109, Liberal Arts Building (or any other room, X).
Area, 710 square feet.
Seats, 36=capacity.

Square feet for each unit equals area divided by number of seats $=\frac{710}{36}=19.7$ square feet.

Maximum occupancy per period, 33.
Minimum occupancy per period, 7.
Average occupancy per period, 20.

"O" ratio for room, $\frac{20}{36}=55.5$ per cent.

Adding the "O's" of the 23 classrooms in the building and dividing by 23 gives the average classroom O of this building. Adding the average classroom Of all buildings under consideration and dividing by the total number of buildings having scheduled classroom space (7) equals the classroom O for the plant=49.53 per cent.

Explanation of the time ratio "T."—The percentage of the total scheduled time that classrooms are actually occupied is given the title "Time" (T). In the case just cited the time ratio (T) equals 37.13. The method of obtaining the ratio "T" is as follows:

For any single room the ratio "T" is obtained by dividing the number of periods per week that the room is regularly occupied by 44 (the total possible teaching periods per week).

For any given building the sum of the resulting percentages for all classrooms divided by the number of classrooms thus regularly scheduled in each building equals the classroom T for the building.

For the whole plant the sum of the T ratios for all buildings having scheduled classroom space divided by the number of such buildings equals the T of the plant's classrooms, or, in the case cited, 37.13 per cent.

The method used for T is in general similar to that used for O, but a numerical example may serve to clarify the process:

Example: Room 109, Liberal Arts Building (or any other room, X).
Periods room is used, 18.
Periods in week (constant), 44.

T ratio for room equals $\frac{18}{44}=40.9$ per cent.

Adding the T's of the 23 classrooms in the building and dividing by 23 gives the average T of the classrooms of the buildings. Adding the average classroom T of all the buildings and dividing by the total number of buildings having scheduled classroom space (7) equals the classroom T for the plant, equals 37.13 per cent.

Explanation of the average use ratio "OT."—The average use ratio (OT) may be defined as the product of the occupancy and time ratios; that is, the average use is made up of both factors, average occupancy and average time used.

The determination of the factor "OT"[1] (average use) for the classrooms at the State University of Iowa then becomes 49.53 per cent of space use (O) multiplied by 37.13 per cent of time use (T) = 18.39 per cent average classroom "use" for the plant (OT).

To give a single numerical example.

Example: Room 109, Liberal Arts Building (or any other room, X).
55.5 per cent (O) × 40.9 per cent (T) = 22.7 per cent (OT).

The same percentage of use may be calculated by this method:

$$\frac{\text{Average occupancy (20)} \times \text{periods used (18)}}{\text{Capacity (36)} \times \text{periods in week (44)}} = \frac{360}{1584} = 22.7 \text{ per cent (OT)}.$$

Either of the methods just given applies only to computations for single room OT. To arrive at the plant's classroom OT, multiply the average classroom O for the plant (see explanation and example above) by the average classroom T for the plant, which equals 18.39 per cent, in the case of the State university.

The examples just given deal only with classrooms; the statements below, A, B, and C, include also laboratories and mixed space. The method used is, of course, the same.

A. STATE UNIVERSITY OF IOWA.

1. Instructional space is 39.757 per cent of the total space.

   Scheduled space is 69.415 per cent of the instructional and 27.415 per cent of the total space.

   By the method of averages—

   (*a*) 49.53 per cent of the classroom's actual capacity is used 37.13 per cent of the time, or an average use of 18.39 per cent.

   (*b*) 51.728 per cent of the laboratories' actual capacity is used 37.65 per cent of the time, or an average use of 19.47 per cent.

   (*c*) 58.613 per cent of the mixed space capacity is used 37.103 per cent of the time, or an average use of 21.76 per cent.

   Combining (*a*), (*b*), and (*c*),

   (*d*) Of the plant's *total scheduled space* (classrooms plus laboratories plus mixed), 53.732 per cent of the capacity is used 36.852 per cent of the time, or *an average plant use of 19.815 per cent* (OT).

   Explanation: 53.732 per cent = Occupancy ratio (O) = the average of the "O" ratios of all buildings, each of which is an average of the "O" ratios of the class, laboratory, and mixed space (considered separately in (*a*) (*b*) (*c*) above) of that building, i. e., an average of the use percentages found by dividing the sum of each building's "O" by the number of buildings having an "O" ratio.

   36.852 per cent = Time ratio (T) = the average of the T ratios of all buildings, as for O, just stated.

   19.815 per cent = Average use ratio (OT) = 53.732 per cent × 36.852 per cent, which combines the factors of space and time to show an actual use of time-capacity of 19.815 per cent for the plant.

2. Accessory space is 54.732 per cent of the total space.

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[1] It must not be assumed that the percentages given here can be compared in any way to 100 per cent. It is not known what an effective percentage for academic utilization of space is. Probably from 35 to 50 per cent would be as high as could be reasonably obtained under favorable conditions at present, and this percentage is a purely empirical one. As far as is known, only one study of this nature has been

B. IOWA STATE TEACHERS COLLEGE.

1. Instructional space is 44.876 per cent of the total space.
   - (*a*) Scheduled space is 87.248 per cent of the instructional and 39.154 per cent of the total space.

     By the *method of averages*—
     - (*a*) 60.32 per cent of the classrooms' capacity is used 38.692 per cent of the time, or an average use of 23.34 per cent.
     - (*b*) 65.638 per cent of the laboratories' capacity is used 34.806 per cent of the time, or an average use of 22.83 per cent.
     - (*c*) 62.46 per cent of the mixed space capacity is used 39.878 per cent of the time, or an average use of 24.94 per cent.
     - (*d*) Of the plant's *total scheduled space*, 59.997 per cent of the capacity is used 39.868 per cent of the time, or *an average plant use of 23.93 per cent* (OT).[1]
2. Accessory space is 53.239 per cent of the total space.

C. IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

1. Instructional space is 44.157 per cent of the total space.
   - (*a*) Scheduled space is 66.082 per cent of the instructional and 29.177 per cent of the total space.

     By the *method of averages*—
     - (*a*) 46.757 per cent of the classrooms' capacity is used 41.72 per cent of the time, or an average use of 19.508 per cent.
     - (*b*) 58.541 per cent of the laboratories' capacity is used 56.25 per cent of the time, or an average use of 32.928 per cent.
     - (*c*) 50.512 per cent of the mixed space capacity is used 45.65 per cent of the time, or an average use of 23.057 per cent.
     - (*d*) Of the plant's total scheduled space, 53.642 per cent of the capacity is used 49.299 per cent of the time, or *an average plant use of 26.444 per cent* (OT).[1]
2. Accessory space is 49.8 per cent of the total space.

RESULTS AND CONCLUSIONS.

Reference to the tables in the appendix will disclose many detailed comparisons which should be valuable to all concerned with the problem of effective utilization. The subject is too great for more than a cursory outline of the salient points.

All the facts, condensed by the same process and brought to a common focus, indicate clearly that the State college at Ames is making the most use of its plant, comparatively, and that the State university, if it feels the pressure of congestion at any point, may find a solution of its difficulty in changes in the rostering of students.

The occupancy ratio, however, may reasonably be low in some cases because of physical limitations, in addition to student roster factors. The room capacity, especially in the older buildings, may be large (40), while a section of students may, by the settled and wise policy of a department or institution, be limited to 20 or less. The

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made, and there the local conditions make a fair comparative basis impossible. The most that can be said is that the figures given here indicate the need of further careful study and collection year by year of data of this type.

[1] See note on p. 105.

desired size of the section has much to do with the utilization indicated by the occupancy ratio. This matter deserves thorough consideration with a view to making needed alterations and fitting future buildings to actual needs, but it should be remembered that when space is used wholly or partially for advanced or research work, the "O" ratio will always be low.

For theoretical purposes it has been assumed throughout this analysis that there is no congestion until the plant is run full time, or 44 hours per week; "microscopic light" and like considerations which would argue against such full-time production are largely matters of individual conviction. Many of the laboratories at Columbia University are working on a full-day schedule and by artificial light until 10.30 at night, and there is no vital difference in the latitudes of the three Iowa educational centers and that of New York, if daylight is to be taken as the determinant of the use or idleness of a room.

As to the facts of the general comparison between the simple OT ratios, the State college at Ames leads in effectiveness of utilization. This is very probably the result of the work of its "efficiency committee." The officials at Ames are to be commended for the independent effort they have already made to know their plant.

The commission strongly urges that at each institution the data on rooms be filed in one place, under the charge of a single officer. The lack of system in this matter in certain institutions may be illustrated by the case of a member of the faculty of one of them who wanted a classroom at 8 o'clock Wednesday mornings, and having none under the immediate control of his department, was without the means of finding such a vacant room. No individual, office, or committee had on file a complete roster or tabular view of the plant. The latent possibilities were unknown.

There is, unfortunately, no other State or National survey of college buildings, so far as is known, on the same or any other comparable basis, that would furnish a norm with which to compare the present operations in Iowa. What the commission has done is to furnish material for the establishment of an "Iowa norm" and detail a method by which the building committee of the board of education may test the validity of claims made upon it by the several institutions.

LIBRARIES AT THE STATE UNIVERSITY AND STATE COLLEGE.

The commission is unanimous in its opinion that library facilities are badly needed at the State university and the State college (Ames), and that the necessary construction should precede any other pending plans for new buildings, especially at the State university.

THE STATE UNIVERSITY.

The statements made by Dean Wilcox and Acting Librarian Roberts, of the State university, in the 1914 Report of the State Board of Education, pages 71 and 84, respectively, were fully substantiated by the commission's personal observation of the library conditions and the data available on the subject. In the first place, the accessions are too highly decentralized to make the administration effective or the function of the department vital. The physical arrangement of the library proper, in the Natural Science Building, is to the disadvantage of officers, students, and faculty.

THE STATE COLLEGE.

The library problem is as pressing at the State college, and demands immediate consideration. With 2,000 square feet of corridor space in Central Hall partitioned off to accommodate overflow books, and cramped administrative space, there is real need for a library building large enough to house the present collections and make due allowance for the ever-growing literature on agriculture and allied subjects.

It is suggested that when permanent quarters are constructed at either institution the building be of the expansive unit type, rather than a *complete* building. It will then be possible to extend the stack space as the collections are increased, and to add later an auditorium section (in both institutions) if cost prohibits the inclusion of the auditorium in the original construction. The commission does not commit itself to the combination of library and auditorium as a permanent feature of construction.

THE PROPOSED BOTANY AND GEOLOGY BUILDING AT THE STATE UNIVERSITY.

The board has asked specifically for advice on the matter of placing the proposed new botany and geology building[1] next in order of construction. The commission has studied the question with all possible care and submits the following statement of facts and opinions, together with recommendations.

The Old Science Building, now occupied conjointly by the departments of botany and geology, is a nonfireproof structure. Since its construction in 1884 it has been little improved to meet modern teaching demands. If the commission's information is correct, the expectation of moving into other and more adequate quarters has inhibited requests for needed improvements in the past four or five years. Requests may have been made, but no record of them was obtainable. In this connection special attention is called to this pertinent excerpt from the appended tables:

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[1] The commission is aware that the plans for this building have been approved by the legislature, but it understands that until the construction is definitely ordered the State board is able to allow other building plans to take precedence of this.

TABLE 8.—*Space and occupancy of buildings at the State university.*

Factors of comparison.	Old Science Building.	Natural Science Building.	Whole plant.
1. Total area ... square feet..	21,227	68,881	....
a. Instructional space ... do....	9,539	9,540	....
(1) Per cent of total ...	44.9	13.8	39.75
b. Accessory space ... square feet..	10,750	48,369	....
(1) Per cent of total ...	50.6	70.2	54.73
c. Combination space ... square feet..	938	10,972	....
2. Scheduled space:			
a. Average ratios of use—			
Occupancy (O) ... per cent..	47.08	42.658	53.732
Time (T) ... do....	34.304	54.166	36.852
OT ... do....	16.155	23.143	19.815
b. Average area per working unit—			
Classrooms ... square feet..	23.150	14.650	22.076
Laboratories ... do....	25.775	43.250	[1] 55.300
Mixed space ... do....	36.800	34.500	[2] 46.080

[1] Cf. high unit for home economics and physics (appendix).
[2] Cf. high unit for home economics; both raise plant average above normal.

It will be noted that there is no apparent congestion in teaching space now used by the botany and geology departments, and that these departments do not seem to be making as good use of their physical facilities as the department of zoology by about 7 per cent average.

The primary consideration of this specific problem becomes, then, not one of teaching, but of museum space. It is granted that such valuable collections as are now in the possession of the departments of botany and geology should be safeguarded against destructive forces. But certain general conclusions with regard to museum space have the indorsement of all the authorities consulted by the commission:

1. The scheme of a complete museum is impossible without practically unlimited funds[1] and time.

2. A State university museum, where there are not large numbers of specialists in zoology, needs a basic type collection for the purposes of the general students; it is important in an agricultural college that a fairly full series of insects should be in a museum as well as representatives of groups of economic importance. A consideration of the arrangement of the zoology museums will show that the collections are too much spread out, with waste of space, according to the best modern practice; that is to say, as regards zoology,

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[1] On the basis of the areas reported by Supt. Fisk, it is found that 42.1 per cent of the building, excluding corridors, is occupied by museums. According to the calculations of the commission, which include corridors and are based on later reports from the superintendent, 27.4 per cent of the building is used for museums. Neither percentage includes the attic storeroom for specimens. Cost to construct building, $275,372.05; investment by State in the zoology museums (27.4 per cent), $75,451.94 (space only).

it is not necessary for teaching purposes at the State university to display all the variations of a species. There is evidently no limit to the ambitious concept of a complete museum, nor is there limit to the resulting expense.

The exhibition of an abundance of specimens has unquestioned cultural value, provided geographical location and flow of population will give the exhibition "circulation" enough to warrant its cost. But such by-purpose is outside of the primary function of teaching and investigation. Highly specializing research students should go to centers of collection, such as Chicago, New York, or Naples, rather than expect all research material to be concentrated within their own State borders. The modern tendency is *not* to have such large collections for teaching purposes.[1]

If the present departmental policy is to be continued, involving the present or prospective use of as much storage space as the museum itself occupies, and the conversion of the present auditorium into a "museum of the State of Iowa" when the new library-auditorium building is built, it is the commission's opinion that the zoology museum should be given either enormously larger grants from the State treasury or an immediate endowment. In this matter the commission has reenforced its own judgment with that of experts on general museum problems. Quite without reference to any specific conditions in Iowa, the opinions summarized above were received.

The Natural Science Building, as originally contemplated, was to house zoology, botany, and geology. This plan was later modified to include temporarily a library and auditorium. Over 15,654 square feet[2] would be released to botany and geology by the removal to a new building of the library (all rooms in the building now used for library purposes, 10,007 square feet) and the auditorium (not including stage, balcony, or the possible area to be gained by flooring the present balcony well, 5,647 square feet). With reasonable compression of the present zoology museums, as discussed above, there would be available what would seem to be ample space for at least botany or geology. It is scarcely correct to pronounce this space inadequate by comparison with the space now occupied by the department of zoology, for the departments of botany and geology would hardly ask a new building of their own to cost the State $200,000 unless there was a serious lack of space where they were originally provided for.

Botany, geology, and zoology could all overlap in the use of class (recitation and lecture) rooms, possibly in some of the laboratories, but *not* in museums. More museum space, comparatively, will be needed by zoology than by the other two departments, because of the greater bulk of the specimens, especially the vertebrates. Twenty mineral specimens will go into about the same space as 20 botanical specimens; 20 zoological specimens demand more.

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[1] Ornithologists teach primarily from skins and not from stuffed specimens such as are abundantly found at Iowa City.

[2] Commission's figures; balcony and stage of auditorium not included.

The proper ratio of storage to display space should be more nearly *one* for storage to *three* for display, than one or two to one. Given 100 per cent museum and laboratory space that can not overlap in a building, it might be said, roughly, that the allotment should be 30 per cent to botany, 30 per cent to geology, and 40 per cent to zoology.

While the facts cited indicate that the present demands may be met by such arrangements as have been suggested, and while it is felt that library and auditorium are at present the most pressing needs, and that the readjustments here outlined would make possible the better accommodation of existing departments, nevertheless it should be pointed out that the university will undoubtedly soon need more than one new building, and that adequate provision for the departments of geology and botany should be included in future building plans.

If the Old Science Building will not yield to modernization by paint, illumination, and rearrangement, in order to accommodate satisfactorily the remaining department (if both botany and geology can not enter the Natural Science Building), the board is then faced only with the easier problem of erecting a simple fireproof structure for that single department.

Alterations will be necessary in the Natural Science Building before the new tenants can be properly housed, and the Old Science Building should be cleaned up, on general principles if for no other reason.

CONCLUSIONS.

In conclusion the commission submits the following considerations to the attention of the board as bearing on the building policy for the future:

1. At a State school no new building should be erected primarily to provide teaching space while suitable teaching space is available in any building on the campus, regardless of the name in which the cornerstone of that building was laid. It is evident that there can be no proprietary control by a department or an individual over space provided by the taxpayers for educational purposes. The principle of the most advantageous use of space for the good of the whole institution should prevail.

2. When a new building is erected, the tendency of any department to spread out over all available space (including some provided for future growth) is one which can be easily checked by the governing authorities. Later contraction or compression is always difficult.

3. Dormitories are not a part of the instructional plant proper, and wherever erected should be self-supporting or even profitable investments for the State. The commission is informed that other colleges are earning as much as 6 per cent net on such investments.

4. Further investigation may reveal a local tradition that work should be concentrated largely in forenoons or afternoons, the time ratio reflecting the extent of the idle time. Any such tradition should be made to justify itself under searching criticism, or be forthwith abandoned. This problem is worthy of especially careful consideration.

The conclusions of the commission are based on as complete a factual study of the problem as circumstances permitted.

In the course of this investigation the commission has become more and more convinced that "needs" can be determined by the several institutions only on the basis of definite surveys of existing facts. Therefore, as a final recommendation, it is urged that the roster committees of the institutions be stimulated by the board's requirement that all askings for buildings henceforth be accompanied by some definite survey of the situation which it is proposed to remedy by new construction, and that the increased or decreased effectiveness of use be brought to the attention of the State board periodically by means of reports similar to those outlined in this statement. A complete study of the possibilities of the present facilities is fully warranted by the large values at stake.

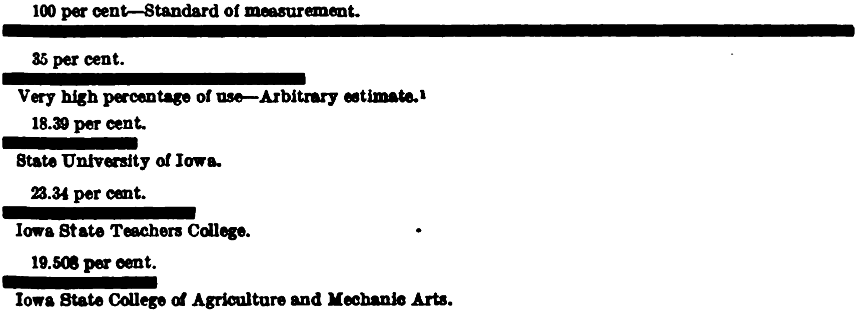
SUMMARY OF RECOMMENDATIONS.

1. At the State university:
   - *a.* The construction of a library and an auditorium as the greatest present need.
   - *b.* The accommodation of one or both of the departments of botany and geology in the space thus released in the Natural Science Building.
   - *c.* The remodeling of the Old Science Building and the construction of a simple fireproof building to house the remaining department and its important collection (in case only one is accommodated in the Natural Science Building). The definite inclusion in future building plans of provisions ultimately adequate for the departments of geology and botany.
2. At the State college:
   - *a.* The early construction of a library and an auditorium.
3. A definite survey of the effective use of present building facilities along lines suggested in this report.

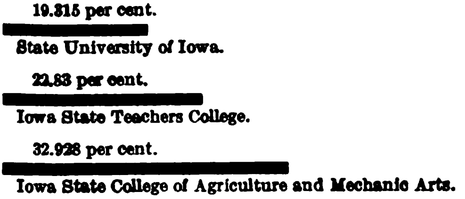
[The following graphical representations of the relations of instructional and accessory space to the total space apply only to the selected buildings as stated. Such relations have no significance except to indicate the nature of the investment in each plant from the standpoint of effective utilization. Combination space is not included in these graphs.]

"OT" RATIOS.

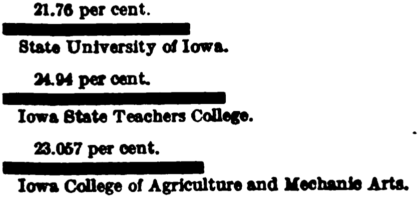
1. *AVERAGE USE OF CLASSROOMS.*



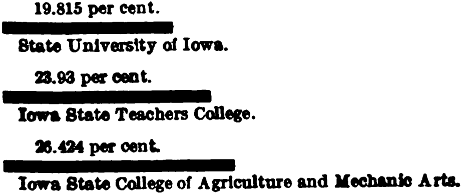
2. *AVERAGE USE OF LABORATORIES.*



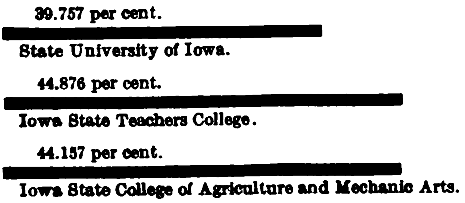
3. *AVERAGE USE OF MIXED SPACE.*



4. *AVERAGE USE OF PLANT.*



RELATION OF INSTRUCTIONAL SPACE TO TOTAL SPACE.



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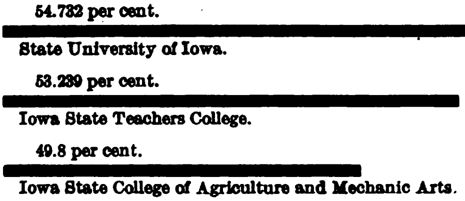
[1] See notes, page 105. No data available for accurate statement.

RELATION OF ACCESSORY SPACE TO TOTAL SPACE.



Chapter XIII.

BUILDING COSTS.

In addition to the foregoing analysis of the use of buildings at the three State institutions, the commission has also undertaken a study of the square feet of floor space provided for each student and the cost thereof. It is hoped that the results of the study, taken in connection with those recorded in the preceding chapter, may help the authorities to estimate the extent of building operations which will be required to house adequately the educational work of the institutions as the enrollments increase. It should be emphasized, however, that this study represents a different aspect of the building problem from that just discussed. Quite different factors are used to obtain the results.

In listing buildings occupied for educational purposes, an attempt has been made to separate them roughly into two groups: "Buildings used in common," as library, gymnasium, heating plant, auditorium; and "buildings used as classrooms and laboratories." This division can be only approximate, as many buildings contain rooms of both classes. The total floor area of each building has been taken, including corridors, closets, stairs, etc. Dormitories and residences have been omitted. Where dormitories are provided by a State, it is only reasonable that the income from them should fully cover all maintenance, cost, repairs, and renewal of equipment and pay from 3 to 6 per cent income on the investment. The erection of dormitories must be based on a desire to provide adequate living accommodations for students and is entirely separate and distinct from the provision of educational buildings.

In determining the square feet of floor space provided per student, the estimated *average attendance* during the present college year, 1915–16, was taken. This average attendance has been calculated according to the method described in Chapter II. It will be apparent that in considering building accommodations we are only concerned with providing adequately for the average number actually on the campus at one time during the college year. Using these factors, the following summary tables have been compiled. It is to be noted that all buildings except dormitories and residences are included in this study, whereas the study of the utilization of space concerned only 10 buildings at the State university, 10 at the State College of Agriculture and Mechanic Arts, and 8 at the State Teachers College.

TABLE 9.—*Cost of buildings of Iowa State educational institutions—Enrollment.*

Items of comparison.	Cost of buildings.	Square feet of floor surface.	Cost per square foot of floor.	Cost per student.	Square feet of floor per student.	Average enrollment of students.
STATE UNIVERSITY OF IOWA.						
Buildings used in common	$380,125	124,028	$3.07	$146	47.7	....
Buildings used for classes and laboratories	1,512,859	494,351	3.06	582	190.0	....
Total	1,892,984	618,379	3.06	728	237.7	....
Students in 1915–16	....	....	....	....	....	2,600
IOWA STATE COLLEGE.						
Buildings used in common	435,962	131,323	3.32	167	50.5	....
Buildings used for classes and laboratories	1,548,085	513,157	3.02	595	197.5	....
Total	1,984,047	644,480	3.17	762	248.0	....
Students in 1915–16	....	....	....	....	....	2,600
Farm buildings	45,700	57,390	.80	17	20.7	....
IOWA STATE TEACHERS COLLEGE.						
Buildings used in common	388,000	150,712	2.58	222	86.0	....
Buildings used for classes and laboratories	498,000	272,714	1.82	284	156.0	....
Total	886,000	423,426	2.10	506	242.0	....
Students in 1915–16	....	....	....	....	....	1,750

Cost per square foot of floor space in some of last buildings erected.

Teachers college:	
Vocational building	$2.72
Library	3.25
State college:	
Chemistry building	2.80
Veterinary building	3.04
University:	
Women's gymnasium	2.46
Physics building	3.48
Average cost per square foot floor	2.96

It will be seen that an average of 243 square feet of floor space is at present provided. The average cost of six of the large buildings recently erected is $2.96 per square foot of floor space. This amounts to $720 per student. Since a considerable quantity of furniture and equipment must be provided for each new building, this figure is probably 10 per cent too low; $750 or $800 per student can probably be taken as a safer estimate. Hence, if the present per capita allowance of space is to be maintained, it seems reasonable to anticipate an expenditure for additional buildings of $75,000 to $80,000 for each 100 increase in the actual average attendance. With approximately $2,000,000 worth of buildings in use at the university and at the State college, respectively, an increase in the utilization of the buildings of 10 per cent over the present practice would be the equivalent of $200,000 worth of additional buildings at each place. Further, the State board must anticipate that from time to time some buildings will be advantageously replaced by more modern structures. Some of the principal considerations, then, which the commission believes that the State board should take into account in determining its building policy for the future are given in the following summary of recommendations.

SUMMARY OF RECOMMENDATIONS.

1. An annual allowance of 2 per cent of the cost of buildings for repairs and renewals of furniture.
2. The replacement of worn-out or antiquated buildings by modern structures of the same capacity.
3. The realization of the necessity of appropriating $75,000 or $80,000 worth of buildings to provide for every addition of 100 to the average attendance after the limit of the utilization of the present space has been reached.

Chapter XIV.

THE PHYSICAL EDUCATION OF WOMEN.

Although not specifically requested to do so, the commission has undertaken to examine the conditions under which physical training is administered to women at the State higher institutions. The matter was forced upon the attention of the members of the commission during the course of their visits and was regarded as of such intrinsic importance as to merit all the consideration which the commission was able to give it. As the result of the investigation the following brief statement is submitted, accompanied by a recommendation.

Physical education is now required of all women students, usually for two years of their course, in the State higher institutions of Iowa. In view of this requirement it is highly important that the facilities provided should be adequate, that the relation of the department of physical training to the administrative departments should be intimate, and that the authority delegated to the physical director should be well defined. Only in this way can the State be absolved of its supreme obligations for the preservation and the upbuilding of the health of its women students.

The new gymnasium at the State university is an excellent, well-equipped, fireproof structure. Since all young women in the university are required to enroll in gymnasium classes, the commission commends the administrative organization which subordinates the gymnasium to the office of the dean of women. This is a particularly happy arrangement in view of the fact that the dean of women registers the women students and acts as course adviser for all freshmen and sophomore women.

While the gymnasium accommodations for women at the State college of agriculture and mechanic arts are limited and will soon be outgrown, the conditions are admirable in every respect and the administration excellent. It is somewhat unusual to find a department of physical education organized as a part of the division of home economics, but, since practically all women at that institution are enrolled in home economics courses, this arrangement makes possible an effective cooperation between the authorities charged with the mental and those responsible for the physical training of women students. It appears to work satisfactorily.

The gymnasium facilities for women at the Iowa State Teachers College are inadequate and the conditions surrounding the work in physical education unsatisfactory, especially with respect to the supply of shower baths and towels and the use of the swimming pool.

The commission recommends that a regular woman physician be employed at each of the three State institutions, whose duty it shall be to advise all women students as to the extent and type of physical training required of each and to exercise general supervision over the health of women students. It is, in the commission's judgment, an indefensible practice to intrust, either directly or by tacit consent, the administration of curative treatment of serious physical ailments to any but regularly trained physicians.

RECOMMENDATION.

The appointment of a regular woman physician at each of the three State institutions to supervise the physical training and the health of women students.

Chapter XV.

THE WORK AND REMUNERATION OF THE INSTRUCTIONAL STAFFS OF THE IOWA STATE INSTITUTIONS.

Highly significant of the standards and administrative efficiency of an educational institution are the amount and character of the work demanded of its instructors and the salaries they receive for their services. The commission has judged that a study of these matters should form a part of its investigations. The board of education, also, in its original invitation (mentioned in the first paragraph of the introduction) to the Commissioner of Education to undertake the survey, specifically raised the questions: Are the classes of proper size, considering economy and efficiency? And, considering the subjects taught, are the members of the instructional staff teaching the proper number of hours a week? In this chapter an attempt is made to answer these questions, to discuss various other matters closely related to them, and to formulate certain principles which it is hoped may be useful to the institutions in the future.

In any college or university the administration determines, through the courses of study adopted, the policy of the institution in regard to the average number of hours per week a student is to be under instruction in lecture, quiz, and laboratory. With this policy fixed, the administration faces the problem of providing an adequate amount of this instruction of the highest quality possible for all students entered.

Some conclusions as to what is an adequate amount of instruction from the point of view of the individual student are generally accepted:

(*a*) In lecture a professor may meet effectively as many as can comfortably hear and see him.

(*b*) In recitation or quiz, 30 in a section is probably the largest number than can be effectively handled, but the desirable maximum for classes of this type would be from 20 to 25.

(*c*) In laboratory work it is commonly agreed that one instructor should be provided for every 15 or 16 students.

Larger numbers in quiz or laboratory sections seriously curtail the attention accorded by the instructor to each individual student.

The number of lecture, laboratory, and quiz sections which one instructor can meet in a week will depend on the character of the work, whether it is elementary or advanced, whether it involves reading a large amount of written work, and whether it consists entirely of separate courses or includes two or three sections of the same course. It will also depend on the amount of outside reading, writing, and research which he is expected to do. In every case a certain variable amount of administrative and committee work will be carried by the members of the faculty.

In the following paragraph some standards are suggested which may be used to test the loads of the members of the teaching staffs of various types of institutions and which may help administrative officers to remedy an uneven and inequitable distribution of the teaching burden. In this discussion the "student-clock-hour" of instruction is taken as the unit. The term may be defined thus: One student under instruction in lecture, quiz, or laboratory for at least 50 minutes net represents one student-clock-hour. For example, 20 students meeting four hours a week in recitation represent 80 student-clock-hours.[1]

A study of any department at once makes it evident that no definite number of student-clock-hours can be fixed for each instructor, but an average for a department may be set up. In a university, or in an institution where research work is encouraged and expected, it seems reasonable to expect a department to carry, on the average, 250 student-clock-hours per instructor. In a distinctly undergraduate college, where research is limited and where little or no graduate work is conducted, a departmental average of 300 student-clock-hours per instructor may perhaps be taken as the reasonable norm. It must be noted also that, in an institution whose program is made up largely of laboratory work, the average number of student-clock-hours per instructor will be higher than in an institution whose program consists chiefly of nonlaboratory courses.

Concerning the quality of instruction, something may be inferred from the salaries paid. Colleges and universities of the first rank must employ well trained and experienced teachers, and must pay them salaries large enough to enable them to support a family modestly and to keep in touch with the progress in their several fields of learning through attendance on the national meetings of the scholars in those fields. The practice of the stronger institutions in this country indicates that the average salary for a department should be at least $2,000 a year. In the judgment of the commission, this amount should be regarded for the time being as the reasonable minimum average in collegiate departments, especially in view of the recent remarkable advance in the quality of high-school instruction and in the remuneration which it commands. In departments that expect to retain men of distinction a higher salary must be paid.

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[1] It should be emphasized that this is a different unit from the "credit hour" or "semester hour." Usually two or three hours of laboratory work are required as the equivalent of one hour recitation, where semester credit hours are considered. The "student-clock-hour" here used as the unit does not discount laboratory hours, but counts laboratory, lecture, and quiz exercises equally, hour for hour. A student in chemistry one hour in lecture, one hour in quiz, and four hours in laboratory in a week would be counted as receiving six student-clock-hours of instruction.

If the curriculum of an institution demands that each student shall be under instruction on the average for 20 hours a week in lecture, laboratory, and recitation, then for every 1,000 students 20,000 student-clock-hours of instruction must be provided by the administration. If instructors carry an average of 300 student-clock-hours each, 67 instructors will be required. It is also clear that, with a fixed sum for institutional maintenance, the best salaries can not be paid unless the average load of student-clock-hours closely approaches the desirable maximum. For instance, if an institution providing 20,000 student-clock-hours of instruction has $134,000 to spend on teachers' salaries and employs 80 instructors instead of 67, the average load of student-clock-hours will be reduced, but so will the average salary.

Credit value of courses.—In general an instructor dealing with elementary or intermediate classes can do more effective work by teaching a few courses three, four, or five hours a week each than by teaching a greater number of courses of less credit value. While one and two-hour courses may be justified by special conditions, such courses should, as a rule, be discouraged as uneconomical of teachers' and students' time. The commission is of the opinion that an elementary course three, four, or five hours for one semester can be more profitably taught and studied than one of one or two hours for two semesters.

Size of classes.—Classes of five students or less can rarely be justified except in advanced work or in the graduate school. Courses enrolling 10 or less are expensive and should not be given unless the need is fully demonstrated. Many small classes indicate in some cases the lack of adequate study of curriculum or schedule by the administrative officers, and in others an undue effort by departments to serve the whims or the convenience of students in order to build up departmental enrollment. Large classes, on the other hand, unless they are lecture classes, usually entail inferior educational results. Classes of over 30 are at least open to question. Any considerable number of them generally shows a need for more instructors, or a poor distribution of students or instructors.

Below are summary tables showing for each of the three State institutions the average salary paid in each department; the average number of student-clock-hours carried by the instructors in each department; the average salary paid by the institution; the average number of student-clock-hours carried by each instructor; the average number of student-clock-hours carried by each student; the number of courses given respectively one, two, three, four, and five hours a week; the number of sections having from 1 to 5 students, 6 to 10 students, etc., and the ratio of each of these groups of courses to the total number of courses given at the institution.[1]

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[1] For detail tables from which these summaries have been compiled, see Appendix, p. 158.

TABLE 10.—*Number, salaries, and work of full-time instructors in liberal arts and applied science in University of Iowa, 1914–15.*

Departments.	Full-time instructors.[1]	Average salary.	Average student-clock-hours taught by instructors in department.		Increase in departmental salary budget, 1915–16.
			First semester.	Second semester.	
Botany	6	$1,517	119	160	$900
Chemistry	11¼	1,430	178	130	300
Education	5¾	2,300	200	200	15,780
English	12¼	1,995	243	237	6,100
Public speaking	2	1,325	241	230	450
Geology	4	1,900	486	501	1,000
German	7	1,683	391	329	1,450
Greek	1½	....	71	125	....
History	5	1,960	251	260	4,425
Latin	3	2,200	157	144	....
Mathematics	7¼	1,580	234	160	550
Philosophy and psychology	5	2,300	275	269	2,600
Physics	6	1,634	303	280	1,075
Economics and sociology	5½	2,200	331	388	7,500
Political science	3½	1,690	296	356	1,850
Romance languages	4	1,625	442	361	3,000
Zoology	8½	1,685	279	253	650
Home economics	3	2,133	376	328	4,000
Applied science	20½	1,800	220	171	....
Total	119½	213,676	31,606	28,634	....
Average	....	1,790	264	240	....

[1] By a "full-time instructor" is meant an instructor giving his entire time to teaching. In the case of men giving part time to the State Experiment Station a proportional fraction of their time and salary was credited to teaching. Instructors teaching half time on a small salary and devoting the balance of their time to study are counted as one-half instructors.

The enrollment of students was approximately 1,665;[1] average student-clock-hours to the student, 19.

It will be noted that certain departments are manifestly overloaded and should be relieved. Other departments could carry a larger load without being overburdened.

Credit value of courses.—There were 30 sections having one hour per week, 185 sections with two hours, 82 sections with 3 hours, 30 sections with 4 hours, 15 sections with 5 hours, and 16 sections as arranged.

The commission thinks that better results could be obtained in introductory, elementary, and intermediate courses, with some saving of strength, by the reduction of the number of one-hour and two-hour classes. This might be done in many cases by offering three or four or five hour courses for one semester in place of one or two hour courses for two semesters.

Size of sections.

	Students.		Students.
95 sections	1 to 5	43 sections	31 to 40
80 sections	6 to 10	15 sections	41 to 50
Per cent, 39.		9 sections	51 to 60
120 sections	11 to 20	4 sections	61 to 70
77 sections	21 to 30	1 section	71 to 80
Per cent, 44.		2 sections	81 to 90
		2 sections	110 to 130
		Per cent, 17.	

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[1] The entire enrollment was not studied; for example, the dental school, the medical school, and others were omitted.

TABLE 11.—*Number, salaries, and work of full-time instructors in the State college of agriculture and mechanical arts.*

[The data below refer only to collegiate students and the courses offered for their instruction in the various departments.]

Departments.	Full-time instructors.	Average salary.	Average student-clock-hours taught by instructors in department.	
			First semester.	Second semester.
Agricultural editing	3⅓	$1,980	99	188
Agricultural journalism	1⅔	1,730	189	252
Agricultural engineering	6⅔	1,590	495	455
Animal husbandry	7⅔	2,170	528	517
Bacteriology	2⅓	1,850	164	342
Botany	6⅔	1,490	423	349
Chemistry	24⅔	1,080	430	372
Civil engineering	8⅓	1,820	376	373
Dairy	4⅔	1,840	197	349
Economical science	3	2,030	310	168
Electrical engineering	4	1,875	144	150
English and literature	15	1,275	201	160
Home economics	15⅓	1,320	346	321
Farm crops	7⅔	1,630	387	320
Horticulture	5⅓	1,500	286	206
Mechanical engineering	15	1,475	426	430
Physics	9 3/16	1,490	266	220
Zoology	7⅓	1,550	280	456
Mathematics	12	1,370	262	235
Public speaking	3	1,133	132	108
Forestry	2⅓	1,740	160	164
Geology and mineralogy	2 1/16	2,380	87	91
History	2	1,725	95	308
Soils	3⅓	2,090	495	304
Modern languages	6	1,325	234	313
Music	3/16	1,125	232	370
Psychology	2	2,250	278	211
Structural design	1	2,500	115	443
Veterinary medicine	9	2,065	302	236
Total	190	297,944	61,069	58,354
Average		1,565	322	305
Enrollment of collegiate students			2,522	2,497
Average student hours per student			24.2	23.3

Credit value of courses.

	Credit hours per week.		Credit hours per week.
65 classes had	1	1 class had	3⅔
6 classes had	1⅓	28 classes had	4
17 classes had	1⅔	7 classes had	4⅓
126 classes had	2	1 class had	4⅔
11 classes had	2⅓	29 classes had	5
11 classes had	2⅔	1 class had	5⅔
84 classes had	3	5 classes had	6
11 classes had	3⅓		

It seems to the commission that some reduction in the variety of hours' credit offered would be advisable and also a reduction of the number of one and two hour courses. It should be noted, however, that at this institution an unusually large per cent of the students' time is spent in the laboratory, where three hours' work is required for one hour of credit. This explains the fractional credits.

Size of sections.

	Students.
162 sections	1 to 5
149 sections	6 to 10
Per cent, 27.5.	
405 sections	11 to 20
335 sections	21 to 30
Per cent, 56.6.	
92 sections	31 to 40
39 sections	41 to 50
21 sections	51 to 60
9 sections	61 to 70
5 sections	71 to 80
5 sections	81 to 90
1 section	91 to 100
10 sections	Over 100
Per cent, 15.9.	

It is to be noted that at the State college 136 to 144 semester hours' credit are required for graduation, as against 120 semester hours at the university, exclusive of physical training and military drill, and 120 at the State Teachers College, exclusive of physical training and work in literary societies. It will also be observed that each student at the State college carries about 24 student-clock-hours of instruction as against 19 or 20 at the other institutions.

TABLE 12.—*Number, salaries, and work of full-time instructors in Iowa State Teachers College, 1914–15.*

[The following data refer to the collegiate enrollment only, including all students in the two-year and four-year courses, entrance to which is based on a four-year high-school course.]

Departments.	Full-time instructors.	Average salary.	Average student-clock-hours taught by instructors in department.				Increase in departmental salary budget, 1915–16.
			Summer.	Fall.	Winter.	Spring.	
Education	7	$1,871	650	535	527	485	
Teaching	12	1,233	327	143	148	229	$1,920
English	7	1,714	354	361	393	366	
Latin	2	1,850	110	165	183	156	
German and French	2	1,700	258	335	328	233	
Mathematics	1	2,300	595	245	219	220	
Physics and chemistry	4	1,575	348	316	222	240	
Botany, agriculture, geology	4	1,850	650	446	331	746	200
History	2	1,450	400	440	393	403	
Government	1	2,200	766	287	180	295	
Economics	1	1,800	467	321	436	366	100
Art	3	1,333	492	178	353	301	
Music	3	1,700	770	368	312	236	
Manual arts	2	1,800	254	182	280	356	
Home economics	3	1,166	305	243	298	238	200
Total	54	86,100	17,338	16,609	16,382	17,928	
Average per instructor		1,594	321	308	303	332	
Enrollment of collegiate students				906	949	946	
Average student hours per student				18.3	17.3	18.9	

The commission submits that these figures indicate a very uneven distribution of the teaching burden and an inadequate number of teachers. If a better distribution of the teaching burden could be secured by the administration, it would partly relieve the situation, but at least five or six additional instructors should have been employed in 1914–15 to carry the load of that year.

Credit value of courses.—Almost all classes meet five hours a week. While this is admirable in elementary work, especially in the work of the first two years, it seems desirable to the commission to provide shorter courses, say, of three hours, for juniors and seniors. This is in accord with the practice of most strong and progressive institutions. Such an arrangement would probably raise the standard of the upper-class work and at the same time give greater variety of election to upper-class students.

Size of sections.—The figures give the average number of sections of sizes indicated for the year 1914–15, exclusive of the summer term. Subcollegiate classes are not included.

	Students.
15 sections	1 to 5
33 sections	6 to 10
Per cent, 30.	
50 sections	11 to 20
36 sections	21 to 30
Per cent, 53.75.	

	Students.
19 sections	31 to 40
5 sections	41 to 50
2 sections	51 to 60
Per cent, 16.25.	

TABLE 13.—*Summary of the data concerning size of sections in the three State institutions.*

Sections at—	Number of students in section.									
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	80 and over.
University of Iowa	95	80	120	77	43	15	9	4	1	4
State college	162	149	405	235	92	39	21	9	5	16
Teachers college	15	31	53	38	19	5	3	....	....	....

Certain interesting facts bearing on the administration of the three institutions appear in the foregoing summary. During 1914–15, 532 classes were given in which 10 students or less were enrolled (university, 175; State college, 311; teachers college, 46). The commission recommends that the officers of the institutions make a careful study of each of these classes to determine which of them were justified and which could have been omitted or postponed without material loss. Indeed, the commission is of the opinion that the administration of each institution should annually give the question of small classes earnest consideration, and that, in view of the expense involved, the organization of such classes should only be sanctioned upon presentation of evidence that they meet a real need of a deserving group of students.

In 1914–15, 285 classes of more than 30 students each were given instruction (76 at the university, 182 at State college, 27 at teachers college). The commission also recommends a study of these classes to determine which of them were lecture classes, and therefore probably of justifiable size, and which were quiz or recitation sections, too large for the most effective teaching. As to the latter the administration should inform itself whether reductions might be effected by a redistribution of the work among the present members of the teaching staff, or whether additional instructors are needed to prevent the overcrowding of sections. Certainly in all departments where the average number of student-hours is less than 250 or 300, quiz and recitation sections of over 30 could be avoided by the proper distribution of work.

SUMMARY OF RECOMMENDATIONS.

1. The establishment of $2,000 as the average minimum salary for collegiate departments.
2. The reduction of the number of one and two hour courses, especially in elementary work and in the first half of the college course, at the State university and the State college.
3. The reduction of the number of small classes (10 or under) at all three institutions.
4. More even distribution of teaching loads, to reduce the number of large classes (30 or more) at all three institutions.
5. The employment of several additional instructors (the number to be determined by the number of student-clock-hours to be carried) at the State teachers college.
6. The provision of a greater number of courses of less than five hours a week (three-hour courses are suggested) at the State teachers college.

Chapter XVI.

OBSERVATIONS ON STATE AND INSTITUTIONAL ADMINISTRATION.

The commission has been much impressed with certain features of the general organization of educational control in Iowa. Some of these are discussed here, in the belief that not only the board, but the people of the State, may be interested in the observations and conclusions of a group of outsiders who have approached the study of the State's problems without local affiliations and without bias.

RELATIONS OF THE STATE SUPERINTENDENT OF PUBLIC INSTRUCTION AND THE STATE BOARD OF EDUCATION.

Allusion was made in Chapter I to the lack of coordination between the office of the State superintendent of public instruction and the State board of education, with reference to the inspection and approval of high schools. The legislation which has made the office of State superintendent wholly independent of the State board of education, together with the legislative action granting subsidies to certain high schools which comply with requirements administered through the office of the superintendent of public instruction, has made possible a disparity between the criteria of standardization as represented in the recommendations and requirements of the superintendent of public instruction on the one hand and the requirements of the institutions of higher learning on the other, especially as the latter are administered through the State board's high-school inspector and his assistants. The commission is of the opinion that, even if overt conflict of authority be avoided by the forbearance, good sense, and mutual consideration of the several parties concerned, it is unwise to have perpetuated a situation which contains the constant menace of friction, tending to stimulate controversial relations among the educational institutions of the State or among the official representatives of the different divisions of its educational system. Several remedies suggest themselves.

In a number of States—for example, California, Illinois, Michigan, Minnesota, and Wisconsin—the State superintendent of public instruction is ex officio a member of the governing board of the State university. The commission is aware of the objection to ex officio members of university boards, particularly when such members are political officials not otherwise connected with the educational system of the State.[1] This objection does not seem, however, to lie against the head of the State's common schools. On the contrary, the inclusion of the State superintendent in the membership of the board of education has the very tangible advantage of emphasizing the unity of the State's educational enterprise. At present the Iowa State board of education is organically cut off from the agencies in control of the public schools, except in so far as it chooses to seek their advice. This is a serious defect in the board's relationship to the interests which it is in part designed to serve. Moreover, it appears evident that the association of the office of superintendent of public instruction with the board in the direct management and control of the higher institutions would at once bring about an understanding by each agency of the plans and purposes of the other and would do away with any further possibility of conflict in the determination of high-school standards, a matter in which both are vitally concerned.

A still more radical alteration of the State's administrative machinery, but one which seems to the commission much more likely to result in the smooth operation of all its parts, would be the extension of the jurisdiction of the board of education to include the public elementary and high schools and the provision for the appointment of the superintendent of public instruction by the board. Several States in which educational administration has reached a high degree of efficiency—notably Massachusetts and New York—have substantially this form of control. While it may be argued that in these States the board is chiefly concerned with the lower schools, and that the State's higher educational enterprise is not nearly of such magnitude as in Iowa, this does not seem to constitute a valid objection. The construction of the Panama Canal was directed by a commission of seven members. In other words, from an administrative standpoint, the size of the undertaking is immaterial. It is the coordination of the powers and responsibilities of the administrative officials and their executive officers that is significant.

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[1] In several States the governor and other State officers are ex officio members of educational boards.

However, if neither of these changes in the constitution or functions of the board of education seems to the people of the State desirable, the commission calls attention to the devices which have been adopted in several States to secure harmony between the governing boards of State higher institutions and the department of public instruction in the matter of high-school inspection. One of the best conceived of these, and, as far as report has come to the commission, one of the most successful, is that in force in Ohio. Its principal features are as follows: The staff of high-school inspectors consists of eight persons, appointed by the superintendent of public instruction. Two of them are not connected with any college or university, two are from the faculty of the college of education of the State university, one each from the faculties of the normal colleges at Oxford and Athens, and one each from the faculties of the normal schools at Kent and Bowling Green. The various faculty representatives on the board of inspectors devote one half the year to inspection and the other half to teaching. The classification and rating of all schools is decided by a majority vote of all inspectors, meeting together under the chairmanship of the superintendent of public instruction. A copy of the report made on each school is furnished to the school itself, and one is sent to each of the institutions from which the half-time inspectors are chosen.

The systems in force in two other States may also be mentioned briefly. In Arkansas the high-school inspector is appointed by the State university and reports both to the university and the State department of education. The object of the inspection is threefold: To determine the granting of State aid, to organize and develop high schools, and to accredit schools equipped to prepare for college. In Florida the high-school inspection is under the joint control of the State university and the State department of education. The high-school inspector is the dean of the teachers' college of the university and reports both to the university and to the department of education. The objects of the inspection are to stimulate the development of weak schools and to accredit schools equipped to prepare for college.

The commission has no right to offer recommendations on these matters, but it desires most earnestly to call them to the attention of the board, the legislature, and the people of the State.

A second subject, also outside of its legitimate field, on which the commission feels constrained to comment, is the constitution of the board of educational examiners. This board determines the qualifications of teachers for the State and issues certificates authorizing individuals to teach. It consists at present of the superintendent of public instruction, who acts as chairman, the president of the State university, the president of the State teachers college, and two persons appointed by the governor. It will be remarked that the president of the State college of agriculture and mechanic arts is not a member of this board. Since the State college is now the recognized training school for certain groups of teachers and is preparing annually such large bodies of young people for the teaching profession, it seems to the commission a matter both of courtesy and good judgment to include the president of that college in the membership of the board of educational examiners.

THE POWERS OF THE FINANCE COMMITTEE AND THE POSITION OF THE PRESIDENTS OF THE HIGHER INSTITUTIONS.

The commission is unanimously of the opinion that to go to the bottom of the difficulties confronting the State necessitates touching upon certain other and more intimate aspects of the organization of the State board of education.

The position of the finance committee seems to demand very thoughtful consideration. Unless the functions of this body are sharply defined and restricted, it appears to the commission highly probable that within a short time many of the responsibilities generally assigned to the executives of State institutions will largely pass into the hands of the committee. If it be desired that the presidents shall become purely *educational* administrative officers, with no responsibility whatever in fiscal affairs, this can perhaps be brought about. It would certainly constitute an interesting experiment in college and university administration—an experiment which most States would prefer to have made for them by some other State. Something of the sort has been more than once suggested. The commission does not, however, understand that this was the purpose of the act creating the committee. It is, nevertheless, clear that a committee of this kind, frequently on the grounds of each institution and by reason of this fact more intimately informed regarding their internal conditions than perhaps any member of the board, partly in consequence thereof enjoying de facto (whatever the theory) large control over expenditures, is likely to acquire powers which it was never intended to convey. With the best of intentions such a committee will inevitably come under the influence of particular faculty individuals or parties, and the president's position may well become decidedly anomalous. It should be emphasized that the committee was everywhere spoken of with respect and appreciation, and the commission doubts whether abler and more efficient appointees could be chosen. But more than once indications appeared that the difficulties predicted had already in some instances begun to be realized. In some cases it seems that members of the faculties have been uncertain as to whether in seeking approval for proposed expenditures they ought properly to go to the president or to the finance committee. This uncertainty is of course capable of speedy correction. Its importance here is simply as an indication of the almost inevitable tendency of a body like the finance committee, consciously or otherwise, to acquire functions commonly restricted to the presidents.

To one unfamiliar with the actual internal workings of an American State university it may seem wholly practicable to divorce the educational supervision from all fiscal control, and as already indicated this has more than once been suggested. But to persons cognizant of the actual circumstances the practicability of this plan seems open to grave doubt. Not only must there be some one whose judgment in educational matters can be trusted when expenditures for wholly new enterprises are at issue; there must also be some authority who shall determine the thousand and one questions of *detail* in expenditure within the limits of a general budgetary program. For example, who shall determine whether, of $2,000 available in general funds, the department of botany shall be allowed to purchase certain desired and perhaps essential additions to its equipment, or instead of this the department of history be permitted to make indispensable additions to its library? Only one can be done at a time. Questions of this kind under any budgetary system are constantly coming up in the larger institutions, and it seems somewhat obvious that an intelligent college president is more likely to reach a decision based on a just consideration of the educational issues involved than any layman, however well intentioned. Illustrations of the same type might be repeated indefinitely.

Now, again, it is not the understanding of the commission that in theory the finance committee forthwith decides this kind of thing, much less that it works in a manner designed to go behind the presidents, or undermine their authority with the faculties and students.

But, as was remarked above, there can be no question that increasingly as time goes on, the more intimate knowledge of the local situations possessed by the members of this committee, as compared with most of the members of the board, must operate to confer on the committee very large power and often a decisive influence. It will in the judgment of the commission inevitably occur that the board as a whole will get further and further away from the institutions, a result which would be highly regrettable. So long as the committee is equipped, as at present, with men of ability and single-minded devotion to the interests of the State, the practical consequences of the situation, so far as concerns the measures actually approved by the board, might be quite beyond criticism. With members of another kind the influence of the committee might be disastrous, and in any case, unless the powers of the committee are carefully defined so as to avoid all possibility of interference with the legitimate influence and authority of the several presidents, there is contained here the seed of serious consequences—among others the entire unwillingness of men of first-rate character and ability to serve the State in the presidential offices. High-grade character and ability always demand, and properly demand, actual power and real responsibility.

The commission finds it difficult to believe that the exclusion from the sittings of the board of education of the presidents of the State institutions of higher education (save on receipt of special invitation) can commend itself permanently as a wise policy. It is the unanimous opinion of the commission that the present procedure subjects the presidents of these institutions to conditions that are incompatible with the dignity of their office and likely to prove provocative of serious misconceptions in the State. From one point of view the presidents, like any of the other officers of these institutions, are simply employees of the State and more immediately of the board. In a larger and truer view of the case, however, they are expert officers of the State itself, responsible for perhaps the most important part of its internal administration, and, as such, every measure ought to be taken which will insure a dignified and complete presentation to the board of the issues affecting the several institutions in their charge. The commission questions most seriously both the propriety and the ultimate efficiency of a system which gives the institutions no official representation before the board, but it leaves it entirely to the initiative of the board to call them in when it sees fit. Such a procedure inevitably puts the administrative head of an institution in the position of a suppliant for favors instead of in the position of an authorized expert presenting to the responsible authorities the interests of the institution immediately in his charge.

Moreover, under present conditions it is difficult for the executives to view their problems as concerned solely with the best service of the State rather than with the upbuilding of particular institutions. If they were regular members of the State board, even though enjoying no vote, their outlook on the situation as a whole would necessarily be at once enlarged and altered and the board would unquestionably enjoy their loyal cooperation in meeting its problems. So far from complicating the transaction of the board's business, as might be feared by some, their joint presence would allay suspicion and create an atmosphere of frankness and fair dealing which could only be conducive to the welfare of the educational interests of the State. It is therefore recommended that the presidents of the State institutions of higher education be made ex officio members of the board of education without power to vote.

SUGGESTIONS REGARDING INTERNAL INSTITUTIONAL ADMINISTRATION.

The commission has been impressed with the possibility of improving certain features of the internal administration of the State institutions. Some of the present practices were no doubt satisfactory when the institutions were much smaller. Their inappropriateness to present conditions is perhaps more obvious to outsiders than to those within the institutions who have become more or less accustomed to the situation and have consequently come to accept it as natural.

At the State university the commission remarked in many ways the evident absence of a definite and consecutive policy in accordance with which the institution has been guided in recent years. This is no doubt in part due to the frequent changes in the presidency, with the consequent disorganization of plans. It is probably also due to the lack of active participation by the faculty as a whole in the formulation and execution of any program for the development of the institution. The university presents rather strongly to a visitor the impression of a group of relatively autonomous departments and colleges, many of them going their own way, with little obvious regard to the interests of other departments and even less for the institution as a whole. In default of a strong continuous centralized administrative control, such a condition tends to give the pushing, and even the selfish individual, an unfair advantage over his less aggressive and more generous-minded colleague. Needless to say, the institution is not always the gainer by the results of this situation. Furthermore, certain individuals may, under these circumstances, acquire essentially vested rights and privileges which it then becomes academic sacrilege to invade. The commission is disposed strongly to urge whatever measures will create or restore a keener sense of faculty responsibility, with a corresponding decrease of departmental autonomy. The department should be the servant, not the master, of the university.

At the State teachers college a different form of administrative policy was encountered which also seemed open to betterment. There is no question here of the usurping by the departments of powers or privileges commonly vested in the executive or in the faculty. But as an incident of the highly centralized organization, there was observed a form of procedure, several times repeated, which perhaps attains a certain administrative efficiency at the cost of a genuine educational efficiency. For example, psychology is taught in the college ostensibly for its value in the science and art of teaching. The college courses in education are given for a similar reason. But the work of the practice school in which these subjects might be expected to find their application, illustration, and correction is conducted under an entirely separate administration and with only the most nominal and perfunctory coordination with the college department. The conditions of mutual understanding and cooperation between these two divisions of the institution, which the commission had been led to expect, proved on analysis of the facts to be of the most formal character. The disparity between the theory of the relationship and the actual fact appeared to be unequivocal. The commission is not unaware of the difficulties, both educational and administrative, involved in the conduct of a practice school and the proper correlation of its work with the academic work in education; nor is it oblivious to the obvious freedom from administrative friction which ensues from a policy of mutual exclusion such as is here represented. Unquestionably it makes for administrative quiet and peace. Also unquestionably it diminishes for the students by an amount not easily estimated, the actual significance of the work in teaching, in psychology, and in education. There is also perhaps an equally great loss in another direction, namely, in the vitalizing of the work of the members of the staff of the practice school which would follow from a more intimate contact with the work of the academic division.

A similar situation exists in the lack of coordination between the rural school division, giving work in education and psychology, and the college department. Here there is no necessary loss to the students, because they do not regularly come into contact with both divisions; but it is hard to believe that a system which keeps two such cognate divisions apart from one another can be realizing at all completely on its own intellectual resources.

Again, the organization of three essentially distinct divisions of work in home economics with separate laboratories, separate staff, separate purchasing arrangements, and the like, makes for needless multiplication of supervisory duties, to say nothing of administrative wastage at other points.[1] In the new building presumably some of these objectionable features will be remedied. But the administrative principle under which such conditions can have arisen is the object of skepticism; and unless this is corrected, the same type of difficulty will certainly occur again. An administrative coordination represented by the nominal subserviency of cognate correlated divisions of work to a central office or person outside the departments concerned may conceivably achieve desirable freedom from some forms of tension, but as represented in the instances cited at the teachers college, it is highly improbable that it could ever meet fully the genuine needs of the students for whom the institution is conducted.

Attention should also be called to the danger that the extension work now in operation at the teachers college may affect unfavorably the work done on the grounds, because of the fatigue and distraction of the staff represented. The work itself appears to be admirably conceived and thoroughly worthy of development; but unless some additions are made to the faculty, or in some other way the school hours of the teachers engaged in this work are diminished, the result is certain—impaired health, impaired intellectual resiliency, and consequent loss of efficiency in the work of instruction at Cedar Falls. On the other hand, if relief of this kind is afforded, the work will bring back to the institution in the way of enrichment and vitalizing of teaching all that it gives.

INTER-INSTITUTIONAL SENTIMENT AND ATHLETICS.

The commission has already several times referred to the unfortunate bitterness which characterizes the attitude of the partisans of each of the State institutions toward those of the others. The tendency to regard with suspicion acts of a sister institution, to impute unworthy motives to its officers and adherents—this is the principal cause of the State's educational woes. It is not an expression of generous rivalry or of wholesome competition. It represents rather a devastating blight fastened upon the whole educational system of the State. That all three of the institutions should have made such genuine progress and should have attained such commanding rank among the collegiate institutions of the country in an atmosphere so hostile to true educational advance is testimony of an amazing innate vitality. The fact indicates that fundamental organic weaknesses are lacking and that Iowa's difficulty is largely a state of mind.

The commission can not believe that the citizens of a strong and enlightened Commonwealth will much longer tolerate a situation in which the most potent instruments for civic and intellectual betterment are thus blunted. It can not believe that the good sense of the State will longer permit petty institutional jealousies, founded for the most part on the merest illusions, to defeat even partially the State's educational purpose. It can not believe that the citizens of Iowa, even the most partisan minded, will much longer fail to see that the State's advantage is above the ambitions of any institution; that true institutional loyalty in any student or alumnus of a State institution means the consideration of the State's advantage first; that any student or alumnus who puts the claims of his institution above those of the State is an enemy alike to the State and to his institution.

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[1] This question has already been discussed. See Chapter VIII.

While the commission is confident that this point of view must inevitably prevail—and it hopes speedily—nevertheless it recognizes the tenacity of existing animosities and the fact that exhortation will probably have slight effect upon them. It is led therefore to suggest one, as it believes, practical step toward the accomplishment of the desired end. This is the temporary discontinuance of intercollegiate football, and perhaps baseball, between the Iowa State University and the Iowa State College of Agriculture and Mechanic Arts.

The annual football game between the college and the university is the occasion of the revival of feuds, charges, and countercharges, the reassertion of differences and criticisms which at best have had only poor reasons for existence. The event, if the evidence is to be trusted, rarely partakes of the wholesome, generous, sportsmanlike rivalry which generally characterizes the relations between other universities in different States—for example, between Minnesota and Illinois. An enthusiastic, intelligent loyalty to an institution on the part of its alumni and friends is one of its strongest assets. Occasions which stir up such loyalty by bringing together large numbers of supporters of an institution like either of these, which is the creature and servant of the State, should be encouraged and supported, but occasions which engender misunderstandings and antipathies, with their consequent disintegrating and harmful effects, are to be avoided. That form of loyalty which finds its chief incentive and expression in hostility toward another creature and servant of the same State can not of itself and in the long run be a good thing for the State or its institutions.

For these reasons the commission recommends that intercollegiate football games at least, and perhaps baseball games also, between the two institutions under discussion should be completely suspended for a period of five or six years. This recommendation has nothing whatever to do with the larger matter of the participation of both institutions in other intercollegiate contests—for example, between either of the institutions and the University of Nebraska or the University of Missouri or the Kansas State College. Games such as these ought to furnish the occasion for gatherings of enthusiastic and sportsmanlike alumni. They would, however, be devoid of the highly objectionable bitterness and institutional prejudices which seem to have contributed in recent years to obscure a sound and appreciative judgment of the merits of each institution by the adherents of the other.

The substitution of cooperation for competition is one of the largest and most outstanding needs in the adjustment of the relations of the two institutions. An earnest and progressive desire to cooperate by the alumni, faculty, and students of both the State college and the university should take the place of the traditional and ofttimes exaggerated rivalry which has hitherto characterized their relations in general. To magnify and perpetuate old antagonisms and fictitious differences under the guise of cultivating loyalty is to prevent the most efficient accomplishment of the State's purpose in creating these institutions.

CONCLUSION.

The commission has no desire to have its last word one of adverse criticism. In spite of the unwholesome effects of such interinstitutional sentiment as has been referred to in the preceding paragraphs, the commission would like to record its keen appreciation of the condition of the three State institutions. It considers that the State is to be congratulated upon the possession of higher schools on the whole so well conceived and well managed. It was especially impressed by the ability and devotion with which the members of the several instructional and official staffs are discharging their functions. An attitude of simplicity and straightforwardness prevails at all three institutions. The standards of all three are high and are conscientiously enforced. The high position of all three among similar institutions in the country is well known and unquestioned.

SUMMARY OF RECOMMENDATIONS.

1. The readjustment of the official relationships between the office of the State superintendent of public instruction and the State board of education.
2. The inclusion of the president of the State college of agriculture and mechanic arts in the membership of the board of educational examiners.
3. The strict definition of the powers and functions of the finance committee.

4. The inclusion of the presidents of the State higher institutions ex officio in the membership of the State board of education, without power to vote.

5. A larger measure of faculty responsibility and a decrease of departmental autonomy at the State university.

6. The closer correlation of cognate departments in the practice school and in the academic divisions of the State teachers college.

7. The temporary discontinuance of football (and perhaps baseball) games between the State university and the State college of agriculture and mechanic arts.

Chapter XVII.

GENERAL SUMMARY OF RECOMMENDATIONS.

DUPLICATION.

1. The adoption of the principle of "major and service lines of work" at the three State institutions.

2. The creation of an annual conference consisting of members of the faculties of the institutions and the State board of education, to adjust questions of overlapping not automatically determined, by the establishment of major lines for each institution.

3. The readjustment of the work in engineering at the State university and the State college, according to one of three methods:
   (*a*) A horizontal division assigning graduate work to one school and undergraduate work to the other. (Judged at present impracticable by the commission.)
   (*b*) The union of the two schools at one place. (Thought by the commission to be at present possibly inexpedient because of the state of public opinion.)
   (*c*) A vertical division of work, assigning some branches of engineering to one institution and some to the other.

4. The discontinuance of the last two years in liberal arts at the Iowa State Teachers College with suggestion of three-year nondegree courses for rural and grade teachers.

5. The enlargement of facilities for practice teaching at the State teachers college.

6. The establishment of additional normal schools.

7. The addition of men to the faculty of the State teachers college, to give half of their time to instruction and half as members of the staff of the State superintendent of public instruction to the supervision of work in the normal-training high schools.

GRADUATE WORK.

8. The encouragement of the development of graduate work at the Iowa State University and the Iowa State College of Agriculture and Mechanic Arts along the major lines of the institutions.

9. The adoption of a rule by the university according graduate status to none but students having a definite proportion of their registration in courses for graduates only.

10. The determination by the university senate, or some other representative body, of the departments to be encouraged to develop graduate courses.

11. The exercise of greater care by the graduate division of the State college in admitting students from other institutions to graduate standing.

12. The creation of a standing committee on graduate work, to consist of two members of the State board of education and three members each from the institutions giving graduate work, the latter to be elected for a term of years by the graduate faculties.

LIBERAL ARTS AT THE STATE COLLEGE.

13. The strict enforcement by the State board of education of the principle that departments of liberal arts and sciences at the Iowa State College of Agriculture and Mechanic Arts shall be simply service departments; especially the revision of the work offered in the departments of economic science, geology, physics, and mathematics, to secure conformity to this principle.

14. The abandonment of courses in chemistry at the Iowa State College which neither contribute to the major lines of that institution nor reenforce the work of the experiment stations.

15. The revision of the requirements for the degree of bachelor of science in the division of industrial science, to render it impossible to secure the degree except on completion of industrial and professional courses (in contradistinction to liberal arts courses) equal in amount to those required in technical curricula.

EXTENSION WORK.

16. The strict application of the principle of the major lines of work to the development of the extension enterprises of the three State institutions.

17. The establishment of a conference on extension work composed of members of the board of education and extension officers of the three institutions to discuss projects.

DUPLICATION IN EDUCATION AND PSYCHOLOGY.

18. The imposition of no external limitation upon facilities offered at the three State institutions for giving work in home economics, agriculture, and manual training until the present force of teachers

in the State schools is equipped to meet the obligations imposed by the State law.

19. Thereafter the delimitation of work in psychology and education at the State college to the amount requisite to meet the requirements of the first-class State certificate.

20. The provision of better practice facilities at the State university.

HOME ECONOMICS.

21. The development at the Iowa State University of home economics as a service department along lines that will make it of greatest value to students majoring in other courses of study.

22. The avoidance by the university of courses that duplicate the work offered at the State College of Agriculture and Mechanic Arts in the preparation of high-school teachers.

23. The establishment at the university of special lines of work for the training of hospital dietitians

24. The provision in the near future of enlarged accommodations for the department of home economics at the State College of Agriculture and Mechanic Arts.

25. The provision of opportunities for preparation in institutional and cafeterial management at the State College of Agriculture and Mechanic Arts.

26. The provision of special courses for the preparation of trade and industrial school teachers at the State College of Agriculture and Mechanic Arts.

27. The improvement of the accommodations provided for work in home economics at the Iowa State Teachers College.

28. Reorganization of the department at the State teachers college under a single head.

SUBCOLLEGIATE WORK.

29. The continuance of subcollegiate work at the State teachers college.

30. The abandonment by the State College of Agriculture and Mechanic Arts of all noncollegiate work, except for limited short courses, in winter or in summer, for special groups of students. The establishment of corresponding work in selected high schools throughout the State under the direction of the State college.

JOURNALISM.

31. The approval of the work in journalism now offered at the Iowa State University and the Iowa State College of Agriculture and Mechanic Arts and the limitation of it to approximately its present scope.

COMMERCE.

32. The moderate expansion and better correlation of courses now offered in various departments of the Iowa State University, rather than the creation of a separate school of commerce.

UTILIZATION OF BUILDINGS.

33. At the State university:
(*a*) The construction of a library and an auditorium as the greatest present need.
(*b*) The accommodation of one or both of the departments of botany and geology in the space thus released in the Natural Science Building.
(*c*) The remodeling of the Old Science Building or the construction of a simple fireproof building to house the remaining department and its valuable collections (in case only one is accommodated in the Natural Science Building). Adequate provision for the departments of geology and botany to be a part of any building plans relating to the immediate future.
(*d*) Larger utilization of the physics building.
34. At the State college:
(*a*) The early construction of a library and an auditorium.
35. A definite survey of the effective use of present building facilities along lines suggested in this report.

COST OF BUILDINGS.

36. An annual allowance of 2 per cent of the cost of buildings for repairs and renewals of furniture.

37. The replacement of worn-out or antiquated buildings by modern structures of the same capacity.

38. The realization of the necessity of appropriating $75,000 or $80,000 worth of buildings to provide for every addition of 100 to the average attendance after the limit of the utilization of the present space has been reached.

PHYSICAL EDUCATION OF WOMEN.

39. The appointment of a regular woman physician at each of the three State institutions to supervise the physical training and the health of women students.

WORK AND SALARIES OF INSTRUCTORS.

40. The establishment of $2,000 as the average salary for a department.

41. The general reduction of the number of one and two hour courses, especially in elementary work and in the first half of the college course, at the State university and the State college.

42. The reduction of the number of small classes (10 or under) at all three institutions.

43. More even distribution of teaching loads to reduce the number of large classes (30 or more) at all three institutions.

44. The employment of several additional instructors (the number to be determined by the number of student-clock-hours to be carried) at the State teachers college.

45. The provision of a greater number of courses of less than five hours a week (three-hour courses are suggested) at the State teachers college.

STATE AND INSTITUTIONAL ADMINISTRATION.

46. The readjustment of the official relationships between the office of the State superintendent of public instruction and the State board of education.

47. The inclusion of the president of the State college of agriculture and mechanic arts in the membership of the board of educational examiners.

48. The strict definition of the powers and functions of the finance committee.

49. The inclusion of the presidents of the State higher institutions ex officio in the membership of the State board of education, without power to vote.

50. A larger measure of faculty responsibility and a decrease of departmental autonomy at the State university.

51. The closer correlation of cognate departments in the practice school and in the academic divisions of the State teachers college.

52. The temporary discontinuance of football (and perhaps baseball) games between the State university and the State college of agriculture and mechanic arts.

APPENDIX A.

DISCUSSION OF CERTAIN DEPARTMENTS OF IOWA STATE COLLEGE.

CHEMISTRY.

As a reinforcement of the judgment of the commission with respect to the development of the department of chemistry at the Iowa State College, comparison is made between the announcement of courses in chemistry by the college and similar announcements by the University of Wisconsin and the University of Illinois. In the latter institutions it should be noted that the department of chemistry is not merely a service department, meeting the instructional and investigational needs of the colleges of agriculture and engineering and allied experimental work. These institutions have developed strong advanced and graduate courses in general, theoretical, analytical, and applied chemistry, courses such as would be expected in a unified institution embracing a college of liberal arts and sciences, as well as colleges of agriculture and engineering, and also a great graduate school, in which the department of chemistry is a major factor. The announcements of the department of chemistry in the Iowa State College cover 109 different courses, each having a number. They represent at least 320 semester hours, after excluding 17 courses for which no credit hours are specified; 14 courses out of these 17 are " research " courses. Of the 109 courses, 8 are substantially four duplicate sets of two-semester courses, covering approximately the same ground, but having slightly varied credits to fit into curricula leading to different degrees.

The corresponding announcements in chemistry in the University of Wisconsin in 1914–15 comprised about 114 courses, and in the University of Illinois about 88 courses, of which 36 were for graduates only. The total number of semester hours represented by the 88 courses at Illinois was about 273. Each semester's work at Illinois and Wisconsin has been computed as a separate course, even if announced in the catalogue as a year course with a single number.

In the announcements of the department of chemistry of the Iowa State College no hint is given as to how many of the 109 courses are given in alternate years or in sequence, or how many of them have not been given at all; nor is it quite clear how far the different courses overlap. The announcements give the impression of a symmetrical development. The following tabulation of the instructional staff of the three institutions under discussion is illuminating:

Number of instructors.

	Iowa State College.	University of Illinois.	University of Wisconsin.
Professors	2	6	6
Associate professors	5	....	2
Assistant professors	....	4	6
Associates	....	3	....
Instructors	7	8	13
Assistants	10	19	21
Graduate assistants	....	19	....
Lecturers	....	....	6

It needs no argument to show that a staff of 2 professors, 1 of whom is on leave of absence, 5 associate professors, 1 of whom is on leave of absence, 7 instructors, and 10 assistants, of whom some are graduate students in the department, can not give every year 109 courses, involving more than 320 semester hours. Any endeavor to give a large proportion of these courses every year would certainly lead to a lowering of the grade of instruction through overloading of instructors.

MODERN LANGUAGES.

The department of modern languages offers instruction in French, German, and Spanish, aiming at "the selection of material to be used in the study of languages, so that they will be helpful to the student in the pursuit of the technical subjects which make up the main body of his work." In French 8 courses are offered, with a total of 23 semester hours, or if alternatives in advanced French prose be considered, 29 hours. Of this, 8 or 10 hours constitute work in elementary French, of which 6 hours are devoted to scientific French, with "selected readings in physics, chemistry, geology, and mineralogy." The purpose in giving 6 or 12 hours in advanced French prose, as announced above, is not quite clear, however, in view of the fact that so few high schools in the Middle West enable students to secure enough hours in that subject for admission, so that they could take advanced French in their freshman and sophomore years. Courses in Spanish, which are now considered important for engineers, number 4, with a total of 16 hours, of which 6 or 10 belong to elementary Spanish.

In German 20 different courses are announced, covering a maximum credit of 62 semester hours, of which 10 hours are in elementary courses for beginners and 6 for students who have had one year of high-school German. One course is for students in botany, bacteriology, chemistry, etc., 6 hours for the year; another having the same prerequisites and the same credit value is made up of "readings" in physics (such topics as sound, heat, light, and electricity), chemistry, geology, and mineralogy. A third is given in advanced German prose, a fourth in Goethe's "Faust," and a German "seminar" is devoted to some phases of Goethe's work. When compared with the modest offerings in Spanish and in French, the offerings in German appear somewhat excessive, especially when it is stated that only 5 students from home economics and industrial science constitute one of these advanced classes. In this connection it is to be noted that the Iowa State College offers a total of 62 semester hours in German as a service department, and the State University of Iowa offers 88 semester hours, exclusive of courses for graduate students only, but including a considerable number of advanced undergraduate courses designed to prepare students for strictly graduate work. The latter includes also courses which are given in alternate years, of which in 1914–15 there were 6 hours. These figures, of course, have little to do with the total number of students registered or the number of instructors required. Quite possibly the number of such students in the courses in the freshman and sophomore years is already greater at the State college than at the State university, but in these cases the larger number of students would be taking their work in sections of a single course instead of courses of different grades or different content.

MATHEMATICS.

The department of mathematics is one of the large service departments, and has a departmental staff, perhaps the largest in the State. It is estimated that nearly 80 per cent of all the students in Iowa State college pursue some course or courses in mathematics. In its capacity as a service department, it must offer more advanced courses than the department of English in order to support the advanced technical courses in physics and engineering. A student, however, may major in mathematics in the course in industrial science, and in that case he takes a total of 36 to 41 hours in the department. The department announces 13 courses for undergraduates, 19 for undergraduates and graduates, and 5 for graduates only. The announcement of 25 of these courses follows this note: "Mathematics 48, or any subject following 48 although taught regularly but once in two years, will be given at any time when there is sufficient demand to justify the formation of a class"; 11 of the 25 were not offered in 1915–16.

The courses thus developed in the department of mathematics include, first, the usual required work in algebra, trigonometry, analytical geometry, and calculus, and then a diversified group of advanced courses comparable with those offered by any department of mathematics in a liberal arts college; advanced integral calculus, theory of the functions of a complex variable, projective geometry, infinite series, vector analysis. Special courses for the assistance of engineers are higher mathematics for electrical engineers, 3 hours; advanced dynamics, 6 hours; differential equations of mathematical physics, 3 hours; and an introduction to the mathematical theory of electricity and magnetism, 3 or 4 hours. A course of questionable propriety in this institution is "*Mathematics as applied to social and economic problems*, probability, finite differences, adjustment and use of mortality tables, annuities, life insurance and investments, and such other subjects as are adapted to the needs of those taking the subject." In this connection it is interesting to note that the offerings in the department of mathematics are more extensive and specialized than those to be found in such great engineering schools as Stevens Institute of Technology, and in Rensselaer Polytechnic Institute, which gives not only the usual undergraduate curricula in civil, electrical, and mechanical engineering, but offers graduate curricula leading to master's and doctor's degrees in engineering and science. The commission is of the opinion that the offerings of this department are more than sufficient for the needs of the college, even when the advanced work is given due weight. With a staff so large as this department has, opportunity should be given to the members to continue productive study even though they do not offer a great variety of advanced and graduate courses in mathematical specialties. The fact that these advanced courses are elected by but few students, or that some of them are given only in alternate years, does not affect the principle involved.

PHYSICS.

An illustration of what looks like a tendency to announce a group of graduate courses in advance of any large demonstrated demand is found in the department of physics, in which a student in the division of industrial science may also major. Without discussing the announcement of several courses with substantially the same content, though with varying credit, for example, "617. Physical Laboratory. Credit 2," and "615. Physical Laboratory. Similar to

617. Credit 1," attention is called to the following announcement of eight courses:

850. Thesis.
1041. Theory of heat.
1042. Wave motion and sound.
1043. Theory of light.
1044. Theory of electricity and magnetism.
1045. Research.
1046. Research.
1047. Physics seminar.

The amount of laboratory work and the number of recitations in studies 1041 and 1047 to be arranged.

Here it should be pointed out again that the State does not need two research laboratories of physics, unless they are so definitely differentiated that the enormously expensive apparatus for the best results in physical investigation need not be duplicated in any considerable measure.

ZOOLOGY.

The department of zoology is an interesting and significant example of a real service department, which in its announcements holds close to the purposes of a service department, at the same time including a wide range of courses which buttress the major interests of agriculture and home economics. It offers 20 courses for undergraduates, 10 for undergraduates and graduates, and 1 for graduates only; 14 of these are really courses in entomology, which in some institutions is constituted as a separate department. Students who wish to make zoology their major in the curriculum in industrial science have opportunity to specialize within this major in morphology, embryology, physiology, and entomology. The department might very well be encouraged to expand its courses in entomology, for example, "42–43. Research in entomology," giving a total of eight semester hours, into a graduate course proper, so closely is the work of entomology, and more particularly economic entomology, connected with the problems of a college of agriculture. The increasing importance of entomology as a field of scientific investigation and expert administration in the State may lead to the appointment of a State entomologist or to an entomological survey. The center of operations of such an office ought to be the State college. Just as the advanced and research work in geology should be placed at the State university, the advanced and research work in entomology should be developed at the State college, with prompt interchange of students and younger members of the faculty who develop talents in one direction or the other.

The one course for graduates only announced by the department, "Neurology, the comparative morphology and vertebrate nervous system, especially the physical anatomy, of the human brain," does not belong in the curriculum of the State college and clearly parallels a course or courses given in the State university in comparative neurology, both in the nonprofessional courses and in the college of medicine. This development of a graduate course at the State college probably represents the individual preference and strength of a professor, rather than a judiciously determined need of the department or the college.

APPENDIX B.

EXTENSION WORK.

AT THE UNIVERSITY OF IOWA.

From the earliest days members of the staff of the University of Iowa have given lectures and courses of lectures in various parts of the State on the subject matter in which they are specialists. This type of extension work, representing a number of the departments of instruction, is still continued, but without an organized plan.

The present extension enterprise of the university is known as the extension division. It is of about two years' standing. The first year the appropriation for this work by the State was $15,000 and for the year 1915–16 it is $17,000. The appropriation act specifically mentions "University extension work," but does not define it.

The extension enterprise is not an organic part of the university in the sense of representing the different departments of research and instruction. It is organized separately, the responsible officer is known as the director, and he does not have a seat in the university faculty. The organization calls for eight in the staff for the current year, although two places are for the present unfilled and three of the persons give only part time. The salary budget for the year is $12,940.

The extension division reports directly to the president of the university. Its relations with the departments of the institution are purely advisory so far as the extension division is concerned, and the cooperation is voluntary on the part of the members of the university staff. Some members of the division have given instruction to university students during the year. No fees or compensation for services are given to any members of the university staff when they are absent on extension business, but their expenses are paid from the extension fund. The regular departments or enterprises of the university receive no allotment of funds from the extension division with the single exception that an annual appropriation of $800 is at present set aside to meet the pay roll of the Lakeside Laboratory, on Lake Okobji, in the northern part of the State. This laboratory has been in existence a number of years as a specialized study center for extension work in botany and related subjects. This allotment of $800 does not cover all the expense of the laboratory.

The special staff for the extension division, aside from the director, is a specialist in business administration, one in educational service, one in debating and public speaking, one in accounting, one in social service, and one in social welfare. Most of these persons bear the title of instructor. The division is organized into bureaus, which are essentially projects or departments of work rather than separate secondary organizations. The general purpose of the extension division is to be of service to the people of the State, particularly to municipalities and to business interests in them, in the way of making surveys, giving advice, and in the holding of meetings and conventions. The enterprises or projects are as follows:

Municipal information;
Social welfare;
Child welfare;
Educational service;
Business administration;
Accounting for retailers;
Debating and public speaking;
Lectures;
Training camp for camp-fire guardians.
Correspondence courses for college credit are in contemplation, but are not yet definitely organized.

Aside from the staff of the extension division itself, about two dozen members of the university staff have gone into the field by arrangement with the division. The extension division feels itself at liberty to call on others, when occasion may arise, for their services. None of the officers is under obligation to partake, but the director reports the best spirit of cooperation on the part of the university membership. This cooperation may be in the nature of lectures or the conducting of more or less definite convention work, the making of special studies in localities, or undertaking research surveys.

The object of the work of municipal information is to collect and to disseminate facts on the many phases of city, town, and village life in Iowa. The division meets the inquiries of municipal officers, voluntary organizations, commercial clubs, and individuals, with information on such problems as municipal government and administration, public utilities, town and city planning, advertising, business organization and methods, street improvement, transportation, public service rates, sewage, sanitation, and municipal accounting.

The project known as business administration is distinct from the above, inasmuch as it deals with retail merchants rather than with municipalities or those representing municipal problems. The service is rendered directly to retailers and also to organizations of retailers who desire to be advised as to the best method of procedure to enable them to assist themselves in their business administration and in methods of cost accounting.

The bureau or project of accounting for retailers concerns itself chiefly with the installation of definite accounting systems in the stores or establishments. It is reported that several of the large firms in the State have taken advantage of the opportunity to secure advice as to better ways of keeping accounts.

The above descriptions of the bureaus or divisions of the work are sufficient to explain the general character of the other enterprises. These enterprises operate largely through organizations of various kinds in the towns and cities and are likely to result in conventions and in some cases in the publication of a bulletin setting forth the best experience on a given subject of inquiry. As illustrations of the kinds of meetings and conventions that have been held, the following may be mentioned: Winter short course in merchandising, under the auspices of the Sioux City Commercial Club; part of the program at Dubuque of the Iowa State Retail Merchants' Association and short course in retailing; short course in Burlington in retail merchandising; conference at Iowa City on supervision for city superintendents, county superintendents, high-school principals, grade principals, and other supervisors; conference of commercial club secretaries at Iowa City; conference of Iowa Latin teachers at Iowa City; an annual day at Iowa City; a municipal lighting day at Iowa City; cooperation in the extension of Y. M. C. A. courses in the localities. If the local organization under which the meetings are held has finances sufficient, it may pay all necessary traveling expenses. The extension division carries the expense necessary to organize the programs in case of such meetings as business institutes, short courses, and the like. About 260 meetings have been held during the past year.

An important part of the extension enterprise is represented in the loan collection of lantern slides. There are several hundred of these slides, which are loaned to high schools. The schools are not charged for use of the slides, the teacher or the schools paying only the express charges both ways and being responsible for broken slides. These slides represent objects and methods in the teaching of botany, geography, physical geography, German, Greek history, Latin.

The extension division has issued 12 bulletins as follows: No. 1, "Street Lighting," by A. H. Ford; No. 2, "Rate Making for Public Utilities," by Wm. G. Raymond; No. 3, "Engineering as a Profession," by Wm. G. Raymond; No. 4, "Store Lighting," by Arthur H. Ford; No. 5, "Economy of Time in Arithmetic," by Walter A. Jessup; No. 6, "Vocational Guidance in High Schools," by Ervin Eugene Lewis; No. 7, "Ninth Annual Announcement of the Iowa High School Debating League," edited by O. E. Klingaman; No. 8, "Water Works Statistics of Thirty-eight Cities of Iowa, with the Meter Rates of Seventy Cities," by John H. Dunlap; No. 9, "Work, Wages, and Schooling of Eight Hundred Iowa Boys in Relation to the Problems of Vocational Guidance," by Ervin E. Lewis; No. 10, "Principles of Advertising," by Philip J. Sodergren; No. 11, "Hygienic Conditions in Iowa Schools," by Irving King; No. 12, "Tenth Annual Announcement of the Iowa High School Debating League," edited by O. E. Klingaman.

AT THE IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

At Ames, extension work has assumed very large proportions, because it is founded on acts of the legislature of nearly 10 years' standing, because it receives the benefits of the Smith-Lever fund appropriated by Congress, and in part because of the character and intention of agricultural-college work in general. Two separate lines of extension enterprise issue from the institution, each under its distinct and separate organization. One is extension in agriculture and home economics and the other in engineering.

1. AGRICULTURE AND HOME ECONOMICS.

The extension of the results of experiment-station work, as well as of the teaching, is an enterprise of many years' operation. The legislature of 1906 authorized or defined the extension work, and the following year the statute was modified. In the former year the sum of $15,000 was appropriated for the work and in the latter year the sum was $27,000. The general purpose of the work as defined by the law and as practiced by the college is to extend to the people of the State the knowledge that is gained by the institution in its experimental and research work, and to make its teaching staff and organization of use to its constituency throughout the Commonwealth. Tests are made in different parts of the State, demonstrations are held, and instruction is given in corn judging and stock judging at the agricultural fairs, institutes, and clubs; farm bureau organizations are maintained; general application of the knowledge and advice accumulated at the institution is made to the farms and homes of the State.

The agricultural extension is organized in a separate department, reporting directly to the president through its director. The director of extension has charge of the administration and organization of the various lines of extension work, receives reports from all members of the extension staff, and is himself part of the time in the field. There is a secretary of agricultural extension who does no field work, but has charge of the office force and makes the speaking, demonstration, and organization dates for the members of the extension department. Comprised in the staff of the department is a State leader of county agents, a State leader of boys' and girls' club work, a supervisor of correspondence courses, a State leader of dairy farming extension, a State leader of creamery extension work, together with such helpers as may be necessary.

The teachers giving the subject matter work throughout the State are members of the various college departments, receiving their instructions as to scientific data from the head of the department, but being under the administration of the extension director so far as appointments, dates, traveling, and salaries are concerned. Conferences between the various subject-matter departments in the college and the director or staff of the extension department tend to solidify the work and to bring all forces into close cooperation. The total extension staff, comprising the officers of the extension department and the extension teachers in the different departments or divisions of the college, numbers more than 50 persons. The subjects represented are animal and poultry husbandry, farm crops and soils, horticulture, veterinary medicine, agricultural engineering, agricultural education, rural sociology, home economics.

Cooperative extension work in agriculture and home economics is under the general oversight of the United States Department of Agriculture, under the terms of the Smith-Lever Act. The allotments of funds, by projects, for cooperative agricultural extension work for the fiscal year 1915–16 in all the States are published in the Weekly News Letters of the United States Department of Agriculture for November, 1915. The allotments for Iowa are as follows, arising from Federal, State, and local funds:

Total, $229,878; administration, $19,058; publications, $71,974; county agents, $47,210; home demonstration, $30,000; movable schools, $40,643; boys' club work, $13,482; live stock, $14,483; poultry, $2,250; dairying, $8,180; agronomy, $11,875; horticulture, $3,000; agricultural engineering, $3,675; farm management, $3,650; rural organization, $1,600; other projects, $22,798.

The projects of the agricultural extension department at Ames as planned for the year July 1, 1915, to June 30, 1916, are as follows:

No. 1. Administration.
No. 1–A. Printing and distribution of publications.
No. 2. County agent work.
No. 3. Home economics or home demonstration work.
No. 4. Movable schools.
No. 5. Boys' and girls' club work.
No. 6. Pomology demonstration work.
No. 7. Truck crops demonstration work.
No. 8. Farm crops demonstration work.
No. 9. Prevention of animal diseases.
No. 10. Dairy farming extension work.
No. 11. Creamery extension work.
No. 12. Farm management demonstration work.
No. 13. Animal husbandry demonstration work.
No. 14. Poultry demonstration work.
No. 15. Farm crops and soils demonstration work.
No. 16. Agriculture in schools.
No. 17. Landscape gardening demonstration work.
No. 18. Correspondence courses.
No. 19. Agricultural engineering extension work.
No. 20. Rural social welfare.

2. ENGINEERING EXTENSION.

The extension enterprise in engineering at the Iowa State College is separate and distinct from the other extension work of the institution, being organized under its own directing officer, who is responsible to the president of the institution. This is entirely a college enterprise, being supported by appropriations that are made to the institution by the State and receiving none of the Smith-Lever fund. The sum of $25,000 is used annually in the work. The regular staff comprises 8 persons, together with more than 20 local instructors who live at various points in the State. Aside from these are professors and associate professors in the college department of engineering who are engaged in extension enterprises. The engineering extension is coordinate with the agricultural extension and has much the same kind of organization, although dealing with a different line of problems. The engineering matters that relate particularly to the agricultural occupations are handled by the department of agricultural extension, inasmuch as they are not professional or are not taught from the point of view of the industrial classes.

The purpose of the engineering extension is to aid and instruct engineers, mechanics, supervisors of industrial concerns, and to be of service to municipalities desiring engineering advice.

The engineering extension is now projected into nine fields or lines of work, as follows:

1. The two-year vocational course at the college at Ames, for electricians, stationary engineers, mechanical draftsmen, and building superintendents. It is the purpose in this division to prepare the student definitely for the industries rather than to give the equivalent of a high-school or manual-training course. In this two-year work 6 men enrolled in 1913; 41 enrolled in 1914; in the fall of 1915 about 45 men entered. A certificate is given for this course, three being awarded in June, 1915.

2. Correspondence and class study at points outside the college. About 600 correspondents and class students in courses requiring from three months to two years for completion had been enrolled up to July, 1915. Industrial courses have been established in a number of the cities of the State, and the department has assisted in promoting and teaching industrial classes in other places. It has organized factory schools, courses for engineers and shopmen, and courses about the State in shop drawing, sheet-metal drawing, carpenter's drawing, cement products, and carpenter's arithmetic. Correspondence students are also accepted under certain conditions. All these courses are held in connection with an organization in the locality that is able to take care of the arrangements and to finance the enterprise.

3. Lecture work on technical and industrial subjects before conventions, labor unions, engineering societies, schools, and other bodies. About 82 such lectures already have been given, practically all of them by members of the extension staff.

4. Short courses for tradesmen were begun in 1913–14 by the holding of a course for painters, an enterprise that was continued the following year and which is now a permanent feature of the engineering extension work required by the master painters' association. Courses are also held for telephone operators, for telephone plant men, and for plumbers, steam fitters, janitors, and firemen.

5. The publication of bulletins in cooperation with the agricultural extension department, four of which have now been issued on manual training for rural schools. Technical bulletins have been published on street lighting, street

oiling, garbage disposal, automobile topics, and also one giving a list of practical books.

6. Automobile institutes were held in 27 towns in the State in 1914, said to be the first work of its kind in the Union.

7. Manual training for rural school teachers under a regular instructor, and in cooperation with the agricultural extension department. This work is correlated with the lines discussed in the bulletins on manual training.

8. A technical service bureau has been organized to give aid to municipalities on the various subjects about which they inquire or on developments that they may be considering. This service is rendered mostly by means of talks by practical men before representative bodies or organizations in the various municipalities. These talks or demonstrations have covered the subjects of roads and pavements, electric lighting, sewers and sewage disposal, water supply, and refuse collection and disposal.

9. Moving-picture films. A set of ten moving-picture films has been used the present year in the schools for educational purposes, showing the methods in use in various industrial occupations and establishments, together with suggestions for their improvement. The success of this service has warranted larger appropriations, and it is now being considerably extended.

At the time of the visit of the commission, class work was being conducted in 14 cities and towns in the State, with a total of 409 registrations. These classes continue throughout the winter. Students taking work by correspondence alone numbered 15. In the classes meeting in the different centers for manual training, the attendance of teachers is 17 to 25. Classes meet every Saturday.

AT THE IOWA STATE TEACHERS COLLEGE.

The extension enterprise issuing from the State Teachers College is definitely and concretely for the purpose of supplementing the previous training of teachers. Study centers are organized in the localities, usually in a high-school building, and under the direction of the county superintendent of schools. These meetings are held on Saturdays, and comprise sessions in forenoon and afternoon combined of about four hours. The study center may continue its meetings on some of the Saturdays throughout the entire school year.

The extension effort of the Iowa State Teachers College is two years old, having started in December, 1913. In the years 1913–14 and 1914–15 the work was supported entirely by counties or localities. The State has now made an appropriation of $19,750 to cover both the per diem or salary of the instructors and the expenses.

The organization at Cedar Falls is known as the extension department of the Iowa State Teachers College, under the directorship of the head of the department of education, who reports directly to the president of the college. There is an assistant director. The heads of the subject-matter departments in the college are called on for this Saturday work in the outside localities. Aside from this, local teachers specially well qualified are secured, and at the time of the visit of the commission 39 of these outside teachers were under employment. City superintendents and other persons who are specialists in certain subject matter are drafted into the work.

The study centers in the localities are of different grades and degrees of efficiency. Some of them are at first in the nature of demonstration centers, to explain to the teachers the importance of the work and the necessity of constantly adding to their professional preparation. In 94 of the 99 courses, study center work has been undertaken. In some cases there is only one study center in the county, particularly when there is one important railroad point where the teachers may easily assemble from parts of the county. In other counties there may be as many as four centers. Each center holds from 2 to 10 meetings in each year, averaging about 5. The number of teachers enrolled in these study centers to November 1, 1915, was 5,051.

Aside from these county centers, an intensive type of work is conducted on what is called the district-center plan. These represent smaller units, sometimes four or five in a county. The work is carried farther and in greater detail and if possible made more applicable to local conditions than in the county study centers. In 8 or 10 counties these district study centers are now organized. These district study centers are administered in the same way as the county study centers, and with the same type of local organization; they differ in their more intensive teaching.

The subject matter in the study centers of both kinds comprises the usual subjects in the school curriculum. Now that the law requires the teaching of agriculture and home economics in the schools, the demand on the part of the teachers for instruction in these subjects is naturally strong.

Inasmuch as the extension work issuing from the State Teachers College is designed only for teachers and to aid them directly in their school work, there is no conflict or duplication with other extension work in the State. At the State teachers institutes and other meetings, members of the extension staff of the State College of Agriculture and Mechanic Arts may give instruction in agriculture and home economics, and that institution also organizes boys' and girls' clubs and prosecutes other work that may have more or less direct relation to the efficiency of the schools; but that enterprise is not designed for professional work with teachers, and therefore the two enterprises proceed along their independent lines.

Under certain conditions, the teachers attending a study center may receive credit of one-half to one point in the State teachers college. The attendance on these study centers is not obligatory on the part of any teacher, but in practice nearly all the teachers of the county attend. It naturally gives them better chances for promotion and increases their efficiency in the schools.

Although covering practically the entire State, this extension work is really in its initial or formative stage. It is to be expected that very shortly it will become a more integral part of the work of the college, employing more persons both at the college and in the localities, and result in more definite credit to teachers who enroll as students, and count more specifically toward the securing or the renewing of the teachers' certificates. Already about 50 persons in the staff of the college are cooperating in these Saturday extension activities, and about an equal number from outside are also taking part as leaders, teachers, or organizers. When the work matures and assumes its full volume, it is probable that other days than Saturday will have to be given to it, and this may mean either a shift in the curriculum of the college, or else the employment of a larger staff and with some arrangement whereby this staff may be employed the other days either in teaching at the college itself or in various kinds of follow-up work in the State. The extension enterprise can not then be carried as extra duty on the part of the teachers, either in justice to the extension or to the regular teaching in the institution. The burden is now too heavy on the regular staff.

If this enlarged and solidified extension enterprise develops, it will be necessary to have some other arrangement on the part of the school system itself whereby teachers may be excused, with pay, for certain days or periods on condition that they enroll and take part in a study-center or similar extension enterprise. In such an eventuality, which seems to follow logically from the situation, a large piece of educational organization will be required.

A regular system of college credits will also need to be devised. At present the conditions for receiving credit for college study center work are: (1) Thirty hours of class instruction for a whole credit, to be applied on the 120 hours required for graduation from the college, with (2) an additional 30 hours of home work, to be planned and assigned by the instructor in charge of the study center, and (3) a satisfactory examination on the work that has been covered. One-half credit may be secured for half of the above work. No teachers are enrolled for credit unless they have met all the conditions for college entrance. The conditions for receiving one-half credit in didactics, to apply on the rural-teachers' course or the normal course in teachers' college in the district study center work, are as follows: (1) Attendance on a district study center meeting for 16 hours of instruction; (2) presentation of one paper on some subject assigned by the local leader; (3) an examination on the book that is used as a text in the district study center course. These requirements and privileges suggest a considerable enlargement of the credit system if the professional extension work with the teachers should grow to meet the evident needs of the teachers of the State.

The commission commends this effort to provide extension teaching to aid the teachers of the State and recommends that larger appropriations be made for it to teachers' college, with a definite State-wide policy which shall have organic connection with the school system.

APPENDIX C.

THE HOUSING OF WOMEN STUDENTS.

Under the general authorization given by the board to discuss any matters which might, in its judgment, bear upon the welfare of the three State institutions, the commission takes the liberty of offering a few brief observations, without specific recommendations, on the housing of women students. The suggestions, which follow, are submitted rather as a summary of what appears to be the best current practice and as a tentative program for the consideration of the board than with the intention of criticizing adversely existing conditions.

Those in control of colleges and universities are manifesting a growing sense of responsibility for the moral and physical welfare of the rapidly increasing number of young women who go from the protection and care of their homes into coeducational institutions. To leave hundreds of young girls recently out of the high school, who are separated from parental influences for the first time, absolutely to their own devices in the conduct of their lives is now commonly regarded as a questionable practice. To intrust their physical well-being to uninterested boarding-house keepers is not less unwise. The girl entering college is in need of something more than intellectual training, sufficient housing, and adequate food. She requires social guidance and assistance in the establishment of character ideals. These can best be given in properly supervised dormitories.

The commission therefore commends the efforts of the State board of education to provide dormitories for the young women in the State educational institutions. There are now excellent dormitories at each of the schools, but all three need additional structures for the accommodation of young women. The immediate end which the commission believes the State should seek to attain in the institutional housing of women students might be stated as follows: There should be enough room so that the freshmen women may be cared for, with 10 per cent excess room for the accommodation of upper-class women. All first-year women, not living with relatives or friends, should be required to live in the dormitories. The surplus accommodation just mentioned permits of the retention in the dormitories of a certain number of mature students, by which arrangement the maintenance of a stable house government is furthered.

It is the opinion of the commission that large dormitories, housing from 100 to 150 women, directed by one preceptress, present certain social disadvantages. Since the rooms occupied by the young women are study rooms as well as sleeping apartments, the grouping of large numbers of students together in one dormitory renders it difficult, if not impossible, to insure quiet. No matter what is decided upon as the best exterior effect, it is suggested that dormitory structures should have an interior arrangement in which the maximum accommodation in one section does not exceed 60. Provision should be made in each new dormitory constructed for evening games and dancing in the hour of recreation and relaxation immediately after supper.

It is entirely feasible to cook for all the women students of the institution in one adequately equipped kitchen, but it is believed that there is a gain in the conditions of social intercourse if the number dining together is restricted to the above-mentioned maximum of 60. The cafeteria plan of feeding students may be economical. The commission favors the table of a well-administered dormitory, however, as more nearly approximating family conditions. Particularly as a boarding place for women students, the cafeteria has one very objectionable feature, namely, that the decision as to the amount of food to be purchased is left to the customer. Under these circumstances women students, out of caprice or because of the desire to economize, are likely to underfeed themselves. The commission thinks that an advisory relationship between the food-service department and the home-economics department should be established at each institution to make sure that the food shall be nourishing and attractive as well as furnished at the minimum cost to the institution and the student.

The commission is of the opinion that there should be systematic inspection and approval of the lodging quarters maintained at each institution. It suggests that the dean of women be authorized to exercise special supervision over the housing of women students in private residences, rooming houses, and sorority buildings, as well as in the institutional dormitories. In the performance of this task she may find it desirable to hold weekly advisory meetings with the women in control of the houses.

The question of rest rooms for women students has also been called to the commission's attention. Not infrequently a young woman must secure an hour's relaxation in a horizontal posture in order to be able to continue her class work. It may consume too much time if she goes to her room, and the fatigue of going and returning may offset the benefit gained. Indeed, if she reaches her own room she seldom returns until the next day. To meet these conditions the provision of rest rooms for women students, especially on the university campus, is advised.

APPENDIX D.

SUBSTANCE OF LETTER ADDRESSED TO THE EDITORS OF JOURNALS PUBLISHED IN THE STATE OF IOWA.

At the request of the Iowa State Board of Education, the United States Commissioner of Education has appointed a survey commission to make a report upon the conditions and needs of the three State-supported institutions of higher education in the State of Iowa. Among the questions suggested for the consideration of this commission is that of the extension of courses in journalism. In order to facilitate the investigation of this question, the survey commission desires certain facts as to the services rendered hitherto by the Iowa colleges and college men to the journals of the State. The survey commission will, therefore, be especially grateful to you for information regarding two or three specific matters concerning the editorial and managerial staff of your publication. This, of course, excludes compositors or machine men, skilled laborers in binderies, stenographers, and bookkeepers.

1. How many persons are employed in the editorial and business departments?
2. How many of these are college men or women?
3. How many of these are graduates of colleges or universities in the State of Iowa?
4. Is there, in your judgment, a large and growing demand for men technically trained in journalism as a profession comparable with the profession of law or railroad management?

APPENDIX E.

BUILDINGS AND CLASSIFICATION OF SPACE.

[With space reported by authorities.]

AT STATE UNIVERSITY OF IOWA.

Buildings.	Date erected.	Instructional.									Accessory.			Combination.	Total found on floor plans.	Total reported.[3]
		Scheduled.							Un-scheduled.	Total.	Administration.	Other.	Total.			
		Class.	Laboratories.	Mixed.	Square feet.	Average "O."[1]	Average "T."[1]	Average "OT."[2]								
Chemistry	1890	4,783	10,023		14,806	56.475	36.138	20.41	3,292	18,098	5,685	3,944	9,629	440	28,167	30,907
Engineering	1905-1909			18,134	18,134	68.980	45.500	31.39	3,620	21,754	3,675	8,212	11,887	423	34,064	54,799
Engineering shops	1910-1914		7,281		7,281		[4] 55.300		3,078	10,359	1,105	1,329	2,434		12,793	12,040
Home economics	1865-1915	2,072	2,076	1,561	5,709	65.750	19.713	12.96	140	5,849	1,771	1,954	3,725		9,574	14,409
Law	1910	7,398			7,398	49.925	19.835	9.88	312	7,710	2,158	17,864	20,022		27,732	26,660
Liberal arts	1897	14,128	1,332		15,460	44.287	39.165	17.37	1,344	16,804	12,205	31,528	43,733	6,856	67,393	74,292
Men's gymnasium	1905-1915								28,187	28,187	5,933	19,177	25,110		53,297	42,692
Natural science	1904	3,298	4,557	1,175	9,030	42.658	54.166	23.14	510	9,540	8,091	40,278	48,369	10,972	68,881	74,804
Old science	1884	926	2,987	3,582	7,495	47.083	34.304	16.16	2,044	9,539	5,037	5,713	10,750	938	21,277	22,372
Physics		7,306	12,028		19,334	54.700	46.001	25.16	3,580	22,914	16,472	15,410	31,882	1,266	56,062	64,660
Total		39,911	40,284	24,452	104,647	429.858	294.822	156.47	46,107	150,754	62,132	145,409	207,541	20,895	379,190	417,635
Plant average						53.732	36.852	19.82								

AT IOWA STATE COLLEGE.

Agricultural Engineering Hall	1893	1,776	7,758	2,783	12,317	65.120	39.739	25.845	416	12,733	4,357	5,071	9,428	695	22,856	22,860
Agricultural Engineering Annex	1903	676	4,937	....	5,613	46.325	46.575	21.576	6,541	12,154	3,326	5,514	8,840	....	20,994	19,400
Agricultural Hall	1907-8	8,843	5,814	876	15,533	56.983	30.843	17.572	3,350	18,883	19,337	22,963	42,300	12,771	73,954	70,869
Central Hall	1904-5	16,960	4,948	....	21,908	50.945	55.142	28.046	1,018	22,926	13,760	36,376	50,136	3,754	76,816	72,227
Engineering Annex	1910	5,242	5,956	1,530	12,728	49.680	44.006	21.868	6,273	19,001	5,235	7,452	12,687	312	32,000	32,632
Engineering Hall	1901-2	3,522	7,057	11,285	21,864	38.491	44.199	17.017	1,446	23,310	5,845	21,199	27,044	2,864	53,218	52,008
Forge shop	1896	....	2,660	....	2,660	44.000	100.000	44.000	....	2,660	234	....	234	....	2,894	2,906
Gymnasium	1912-13	4,966	....	....	4,966	79.400	50.000	39.700	35,069	40,035	1,857	11,648	13,505	....	53,540	47,245
Home economics	1909-10	1,751	9,287	....	11,038	63.855	47.265	30.225	3,196	14,234	3,601	8,460	12,061	....	26,295	24,492
Morrill Hall	1891	864	2,175	....	3,039	41.625	35.225	14.643	20	3,059	8,001	6,357	14,358	2,730	20,147	20,252
Total	....	44,600	50,592	16,474	111,666	536.424	492.993	260.492	57,329	168,995	65,553	125,040	190,593	23,126	382,714	364,891
Plant average	....	....	....	....	....	53.642	49.299	26.440	....	....	....	....	....	....	....	....

AT IOWA STATE TEACHERS COLLEGE.

Auditorium	1901	14,719	....	909	15,628	57.775	36.348	20.98	408	16,031	1,423	40,094	41,517	1,012	58,560	82,036
Domestic science (temp)	....	....	....	2,635	2,635	70.000	45.500	31.85	....	2,635	64	....	64	....	2,699	1,000
Central Hall	1867	6,544	3,420	....	9,964	64.830	47.405	30.72	872	10,836	932	6,990	7,922	830	19,078	22,400
Gilchrist Hall	1882	1,947	780	4,151	6,878	67.793	50.560	34.31	3,536	10,414	810	15,768	16,078	....	[5]26,492	[6]25,740
Administration	1895	7,474	....	852	8,326	66.880	45.610	30.51	1,861	10,187	3,898	16,339	20,237	....	30,424	29,008
Teachers' training school	1912	18,086	2,741	....	20,827	61.155	26.880	16.46	1,669	22,496	4,140	15,826	19,966	3,373	45,835	63,020
Gymnasium	1903	22,430	....	....	22,430	31.250	30.100	9.42	1,626	24,056	2,056	15,686	17,742	....	41,798	45,540
Laboratory	1906	2,538	8,550	....	11,088	60.297	36.542	22.01	4,323	15,411	2,867	6,555	9,422	....	24,833	28,672
Total	....	73,738	15,491	8,547	97,776	479.980	318.945	196.26	14,290	112,066	15,690	117,258	132,948	4,705	249,719	297,416
Plant average	....	....	....	....	....	59.997	39.868	23.93	....	....	....	....	....	....	....	....

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[1] Where ratio is not given, complete information was lacking.

[2] See note on p. 105.

[3] By superintendent of buildings or other official, verbally or in writing; discrepancies between "found" and "reported" space probably due to scale calculations and exterior measurements.

[4] Not included in plant T.

[5] Basement included.

[6] Basement not included.

APPENDIX F.

STUDENT CLOCK HOURS, SALARIES, EXPENDITURES.

UNIVERSITY OF IOWA.

BOTANY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor	$2,500	168	252
——, professor	2,400	315	292
——, assistant professor	1,600	35	131
——, assistant	900	38	82
——, assistant	900	151	125
——, assistant	800	41	83
Total	9,100	748	963
Average	1,517	124	160

Classes.	Students in class.				
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40
Number of classes:					
First semester	12	6	4	4	....
Second semester	9	6	5	5	2

CHEMISTRY.[1]

Instructors.	Salary.	Instructors.	Salary.
——, professor	$3,000	——, (one-half time)	$600
——, assistant professor	1,900	——, assistant	900
——, assistant professor	1,800	——, assistant (one-half time)	500
——, assistant professor	1,800	——, assistant (one-quarter time)	300
——, instructor	1,200	——, assistant	100
——, instructor	1,000	——, storekeeper[2]	[2] 700
——, instructor	1,000		
——, instructor	1,000	Total (11½)	16,100
——, instructor	1,000	Average	1,430

Classes.	Students in class.						
	1 to 5	6 to 10	11 to 20	31 to 40	59 to 67	80	114
Number of classes:							
First semester	10	8	1	1	1	1	1
Second semester	12	6	....	....	2	......	1

---

[1] Total number of student clock hours, first semester, 1,988; average, 178; second semester, 1,466; average, 130.

[2] Not included in total.

EDUCATION.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, dean	$3,500	142	144
——, professor	2,500	234	160
——, assistant professor	1,800	152	278
——, assistant professor	1,600	382	378
——, associate professor	2,200	132	82
——, lecturer (½ time)	500	8	6
——, stenographer [1]	[1] 900	....	....
Total (5½)	12,100	1,050	1,048
Average	2,300	200	200

[1] Not included in total.

MODEL SCHOOL.

Instructors.	Salary.	Instructors.	Salary.
——, teacher	$700	——, teacher	$80
——, teacher	600	——, teacher	80
——, teacher	800	——, teacher	80
——, teacher	80	——, teacher	80
——, teacher	80	——, teacher	80
——, teacher	80		
——, teacher	80	Total	2,820

ENGLISH.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor and dean	$3,500	133	138
——, assistant professor	1,900	401	397
——, assistant professor	1,900	396	354
——, assistant professor	1,900	370	386
——, assistant professor	1,900	258	212
——, assistant professor	1,900	355	275
——, instructor	1,200	192	176
——, instructor	1,300	345	329
——, instructor	1,000	289	254
——, instructor	1,200	197	193
——, instructor	1,200	220	256
——, instructor	1,200	248	310
——,[1] (one-fourth time)	300	68	100
Theme readers, 2 instructors	1,995	....	....
Office assistant [2]	[2] 300	....	....
Total (14¼)	22,395	3,472	3,380
Average	1,580	243	237

Classes.	Students in class.						
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 65
Number of classes:							
First semester	1	3	17	24	12	3	1
Second semester	1	5	21	23	10	1	3

[1] Head of department of English, Iowa City high school.

[2] Not included in total.

PUBLIC SPEAKING.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, assistant professor	$1,650	212	174
——, assistant	900	270	286
——, assistant	100		
Total (3)	2,650	482	460
Average	1,325	241	230

Classes.	Students in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50
Number of classes:						
First semester	1	3	5	1	2	1
Second semester	2	3	2	2	2	1

GEOLOGY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor	$2,600	231	232
——, professor	2,100	548*	647
——, assistant professor	1,500	353	335
——, graduate student (one-third time)	500	192	235
——, graduate student (one-third time)	500	163	159
——, scholar (one-fifth time)	150	148	84
Total (3$\frac{13}{15}$)	7,350	1,635	1,692
Average	1,900	486	501

Classes.	Students in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50
Number of classes:						
First semester	2	4	2	2	4	1
Second semester	2	5	3	3	4	2

GERMAN.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor	$3,000	344	288
——, assistant professor	1,650	375	340
——, assistant professor	1,500	319	325
——, assistant professor	1,650	488	344
——, assistant professor	1,500	392	302
——, instructor	1,200	468	409
——, assistant (4 months)	80		
——, instructor	1,200	347	298
Total	11,700	2,733	2,306
Average	1,671	390	329

GERMAN—Continued.

Classes.	Students in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	52 to 69
Number of classes:						
First semester	1	5	9	13	10	1
Second semester	3	4	13	17	2	1

GREEK.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor and University editor	$3,000	77	151
——, instructor [1] (one-third time)	400	17	16
——, stenographer	433	....	....
Total (1⅓)	3,400	94	167
Average	....	71	125

Classes.	Students in class.			
	1 to 5	6 to 10	11 to 20	30 to 40
Number of classes:				
First semester	4	3	2	....
Second semester	4	4	1	1

[1] Also manager of athletics, $1,900.

HISTORY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, assistant professor and dean of women (one-fourth time)	....	40	34
——, professor and dean	$3,500	77	87
——, professor	2,100	154	172
——, assistant professor	2,000	206	185
—— (one-fourth time)	300	15	52
——, assistant (read notebooks) (one-fourth time)	500	....	....
——, assistant (read notebooks) (one-fourth time)	200	....	....
——, instructor	1,200	724	687
Total (5)	9,800	1,216	1,217
Average	1,960	251	243

Classes.	Students in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	50 to 62
Number of classes:						
First semester	6	5	4	3	1	2
Second semester	5	3	7	2	2	2

LATIN.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor	$3,000	226	202
——, professor	2,100	82	84
——, assistant professor	1,500	163	147
Total (3)	6,600	471	433
Average	2,200	157	144

Classes.	Students in class.			
	1 to 5	6 to 10	11 to 20	21 to 30
Number of classes:				
First semester	4	6	5	2
Second semester	4	6	6	1

MATHEMATICS.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor	$3,000	112	[1] 21
——, assistant professor	1,750	75	32
——, assistant professor	1,750	276	204
——, instructor	1,200	344	205
——, instructor	1,200	375	212
——, instructor	1,000	344	205
——, instructor	1,200	290	250
——,[2] instructor (one-fifth time)	300	8	19
Total (7⅕)	11,400	1,824	1,148
Average	1,580	253	159

Classes.	Students in class.			
	1 to 5	6 to 10	11 to 20	21 to 30
Number of classes:				
First semester	7	7	11	5
Second semester	9	8	11	2

[1] Sick second semester; others carried load.

[2] Instructor in high school, full time.

PHILOSOPHY AND PSYCHOLOGY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, dean	$3,500	447	416
——, professor	2,500	102	86
——, professor	2,400	165	200
——, assistant professor	1,600	521	471
——, assistant professor	1,500	192	170
Total (5)	11,500	1,377	1,343
Average	2,300	275	269

PHILOSOPHY AND PSYCHOLOGY—Continued.

Classes.	Students in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	144 to 173
Number of classes:						
First semester	5	4	4	2	0	2
Second semester	5	3	4	1	1	2

MILITARY TRAINING.

Instructors.	Salary.	Instructors.	Salary.
——, professor	$500	——, bandmaster	$500
——, assistant	500	Band members	460

PHYSICAL TRAINING FOR MEN.

Instructors.	Salary.	Instructors.	Salary.
——, director	$1,600	——, physical director	$1,200
——, assistant	100	——, assistant	300
——, assistant	100		

PHYSICAL TRAINING FOR WOMEN.

Instructors.	Salary.	Instructors.	Salary.
——, director	$1,500	——, matron	$300
——, assistant	800	——, medical examiner	250
——, assistant	600		

PHYSICS.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor	$3,000	57	186
——, assistant professor	1,850	424	356
——, assistant professor	1,850	335	130
——, instructor	1,200	323	270
——, assistant (half time)	600	234	243
——, assistant (half time)	600	252	234
——, assistant (half time)	500	148	180
——, mechanician [1]	[1] 1,350	....	....
——, shop assistants [1]	[1] 200	....	....
——, undergraduate assistant	75	57	51
——, undergraduate assistant	75	....	....
——, undergraduate assistant	75	....	....
Total (6)	9,825	1,817	1,680
Average	1,634	303	280

Classes.	Students in class.							
	1 to 5	6 to 10	11 to 20	21 to 30	69	73	111	133
Number of classes: [2]								
First semester	8	4	18	3	0	1	0	1
Second semester	10	4	14	5	1	0	1	....

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[1] Not included in total.

[2] Lecture and laboratory both counted. About two-thirds as many small classes.

POLITICAL ECONOMY AND SOCIOLOGY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor	$3,000	283	Sick.
——, professor	2,400	332	355
——, associate professor	2,400	529	435
——, instructor (three-fourths time)	1,500	177	259
——, assistant professor	1,800	397	494
——, assistant (half time)	500	154	270
Stenographer, assistant [1]	[1] 300	....	....
——, medical school	0	22	70
——, law school	0	42	28
——, extension	0	22	16
——, extension	0	24	38
——, extension	0	54	53
Total (5¼)	11,600	2,041	2,018
Average	2,200	388	834

Classes.	Students in class.								
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	53	68	89
Number of classes:									
First semester	6	5	8	4	1	5	1	1	1
Second semester	6	5	6	2	8	1	1	1	1

[1] Not included in total.

POLITICAL SCIENCE.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second. semester.
——,[1] professor	$2,600	327	368
——, assistant professor	1,750	285	315
——, instructor (half time)	500	117	156
——, assistant (half time)	500	176	180
——, assistant (half time)	500	102	176
——, lecturer	100	28	54
Total (3½)	5,950	1,035	1,249
Average	1,700	296	356

Classes.	Students in class.							
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	56	68
Number of classes:								
First semester	3	2	4	2	5	0	1	0
Second semester	3	1	1	7	4	1	0	1

[1] Was also director of Iowa Historical Society and drew salary as such.

ROMANCE LANGUAGES.

Instructors.	Salary.	Student clock hours.	
		First Semester.	Second semester.
——, professor	$2,800	503	363
——, assistant professor	1,500	526	318
——, instructor	1,200	302	260
——, instructor	1,000	437	481
Total (4)	6,500	1,768	1,422
Average	1,625	442	356

Classes.	Students in class.					
	1 to 5	6 o 10	11 to 20	21 to 30	31 to 40	41 to 50
Number of classes:						
First semester	2	2	5	2	5	2
Second semester	2	4	6	5	1	1

ZOOLOGY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor and director	$3,000	315	300
——, professor	2,300	506	539
——, professor	2,100	277	305
——, assistant professor	2,000	72	78
——, assistant professor	1,600	318	145
——, instructor	1,100	186	159
——, assistant	1,000	110	108
——, assistant	400	62	56
——, assistant	350	186	158
——, assistant	200	52	46
——, undergraduate assistant, half time	50	101	85
——, undergraduate assistant, half time	50	101	85
——, storekeeper, half time[1]	[1] 50	....	....
——, mimeographer, half time[1]	[1] 50	....	....
——	150	....	....
Total (8½)	14,300	2,387	2,152
Average	1,685	279	253

Classes.	Students in class.									
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	74	81	90
Number of classes:										
First semester	10	4	3	2	7	2	1	0	0	2
Second semester	12	4	4	4	2	4	0	1	1	0

---

[1] Not included in total.

HOME ECONOMICS.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second. semester.
——, professor	$3,000	268	159
——, assistant professor	2,500	603	594
——, instructor	900	246	230
——, clerk to dean [1]	[1] 960	....	....
Total (3)	6,400	1,127	983
Average	2,133	376	328

Classes.	Students in class.						
	1 to 5	6 to 10	11 to 20	55	56	63	71
Number of classes:							
First semester	0	1	1	....	1	....	1
Second semester	2	2	1	1	....	1	....

[1] Not included in total.

IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

AGRICULTURAL EDUCATION.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor	$2,700	51	191
——, assistant professor (one-third time)	500	30	174
——, assistant professor	2,000	141	226
——, assistant (one-half time)	1,000	100	56
Total (2⅚)	6,200	322	627
Average	2,200	114	222

Classes.	Students in class.			
	6 to 10	11 to 20	31 to 40	51 to 60
Number of classes:				
First semester	5	1	3	....
Second semester	2	3	2	2

AGRICULTURAL JOURNALISM.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (one-fourth time)	$712	90	146
——, assistant professor	1,450	146	170
Total (1¼)	2,162	236	316
Average	1,730	189	252

AGRICULTURAL JOURNALISM—Continued.

Classes.	Students in class.				
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40
Number of classes:					
First semester	......	3	4	2	......
Second semester	2	1	5	2	1

AGRICULTURAL ENGINEERING.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, instructor	$1,100	640	576
——, instructor	1,100	748	472
——, instructor	1,300	438	440
——, instructor	1,300	347	368
——, professor (one-half time; experiment station one-half time)	1,500	126	275
——, assistant professor	1,800	600	476
——, associate professor	2,250	315	342
Total (6½)	10,350	3,214	2,950
Average	1,590	495	455

Classes.	Students in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50
Number of classes:						
First semester	1	5	13	13	11	2
Second semester	3	8	22	15	6	1

ANIMAL HUSBANDRY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (one-half time)	$1,500	624	255
——, professor	2,600	552	526
——, associate professor	1,700	627	724
——, associate professor	1,900	568	565
——, associate professor	1,600	662	573
——, associate professor	1,700	678	712
——, professor (one-half time)	1,250	173	190
——, scholar	200	(¼)	(lab.) 124
——, scholar	200	(¼)	(lab.) 112
——, professor (one-half time at dairy farm)	1,250	(½)	226
——, assistant professor	250	(¼)	184
——,	....	(¼)	115
——,	1,500	90	92
Total (7½)	15,650	3,974	4,401
Average	2,170	528	517

Classes.	Students in class.									
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	81 to 90	125
Number of classes:										
First semester	......	2	2	7	13	7	2	4	1	1
Second semester	1	......	5	19	21	7	1	1	......	1

BACTERIOLOGY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor and dean (nine-tenths time)	$2,700	132	237
——, assistant (one-half time)	500	84	184
——, assistant professor (six-sevenths time)	1,200	173	274
——, assistant (one-half time)	600	53	232
Total	5,000	442	927
Average	1,850	164	342

Classes.	Students in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	41 to 50	51 to 60
Number of classes:						
First semester	14	4	7	1	....	....
Second semester	6	6	15	....	1	1

BOTANY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (thirteen-fifteenths time)	$2,600	274	316
——, associate professor	2,000	548	193
——, assistant professor	1,350	211	385
——, instructor (one-half time)	600	159	95
——, instructor	900	222	315
——, fellow (two-fifths time)	400	126	34
——, instructor	800	506	293
——, student assistant (one-fifth time)	200	240	134
——, student assistant (one-fifth time)	200	256	78
——, student assistant (one-fifth time)	200	126	244
—— (one-tenth time)	50	....	78
—— (one-tenth time)	50	....	56
—— (one-tenth time)	50	....	69
—— (one-tenth time)	50	....	40
Total (6⅓)	9,450	2,668	2,350
Average	1,490	423	349

Classes.	Students in class.							
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70
Number of classes:								
First semester	14	6	15	23	6	1	2	2
Second semester	1	4	21	16	5	5	3	....

CHEMISTRY.

Instructors.	Salary.	Instructors.	Salary.
———, professor	$2,700	———, assistant	$900
———, associate professor	1,800	———, assistant	900
———, associate professor	1,800	———, assistant	950
———, associate professor	1,800	———, instructor	900
———, instructor	1,300	———, instructor	800
———, instructor	1,200	———, instructor	800
———, instructor	1,200	———, instructor	800
———, instructor	1,000	———, assistant instructor (three-fourths time)	700
———, instructor	900		
———, assistant instructor	900	———, associate professor	2,000
———, instructor (one-fourth time)	300	———, student assistant (one-tenth time)	....
———, assistant (one-half time)	400	——— (one-sixth time)	....
———, assistant	850	17 others	....

Instructors.	Salaries.	Student clock hours.	
		First semester.	Second semester.
Total (24½)	$26,492	10,572	9,095
Average	1,060	430	372

Classes.	Students in class.											
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100	100 to 325
Number of classes:												
First semester	27	5	40	34	14	8	5	2	1	1	1	6
Second semester	28	13	29	19	12	2	9	2	0	2	2	7

The whole number of student clock hours was, for the first semester, 10,572; for the second semester, 9,095. The average for first semester was 430; for the second semester, 372.

CIVIL ENGINEERING.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
———, assistant professor	$1,400	606	895
———, associate professor	2,000	534	617
———, instructor	1,000	679	407
———, professor (four-fifths time)	2,200	331	477
———, professor	2,400	378	190
———, professor and dean	4,000	....	164
———, instructor (half time)	800	156	115
———, associate professor (seventeen-eighteenths time)	1,700	96	68
———, associate professor (five-sixths time)	1,500	167	155
———, associate professor (three-fifths time)	1,500	169	42
———, instructor	1,200	192	132
Total (8¾)	16,000	3,308	3,262
Average	1,820	376	373

Classes.	Students in class.							
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70
Number of classes:								
First semester	12	16	21	10	1	1	1	....
Second semester	11	11	14	8	3	1	1	1

DAIRY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (half time)	$1,500	169	198
——, associate professor (half time)	1,000	53	182
——, associate professor	1,900	554	678
——, instructor	1,500	....	48
——, instructor	1,200	10	173
——, instructor	1,200	....	464
Total (4½)	8,300	786	1,743
Average	1,840	197	349

ECONOMIC SCIENCE.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (twenty-two twenty-fifths time)	$2,200	235	58
——, assistant professor (half time)	900	19	72
——, associate professor (three-fourths time)	1,500	360	93
——, assistant professor	1,500	315	282
Total (3)	6,100	929	505
Average	2,030	310	168

Classes.	Students in class.						
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60
Number of classes:							
First semester	1	3	1	2	2	3	2
Second semester	1	6	4	1	1	2	....

ELEMENTARY ENGLISH.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (twenty-seven twenty-ninths time)	$2,700	212	146
——, assistant professor	1,900	47	192
——, assistant professor	1,500	204	111
——, assistant professor	1,400	114	153
Total (4)	7,500	577	602
Average	1,875	144	150

Classes.	Students in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50
Number of classes:						
First semester	1	5	5	1	2	....
Second semester	1	3	7	3	....	1

ENGLISH AND LITERATURE.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
———, professor	$2,500	60	36
———, instructor	900	188	122
———, instructor	1,100	292	185
———, assistant professor	1,400	254	144
———, instructor	900	276	242
———, instructor	1,150	232	132
———, assistant professor	1,250	110	126
———, associate professor	1,700	194	98
———, instructor	1,000	221	172
———, associate professor	1,400	138	218
———, assistant professor	1,400	222	192
———, instructor	1,200	228	234
———	950	318	160
———, instructor	950	219	139
———, instructor	1,000	74	159
Total	18,800	3,026	2,359
Average	1,253	202	157

Classes.	Students in class.				
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40
Number of classes:					
First semester	4	15	42	27	....
Second semester	3	7	22	....	1

HOME ECONOMICS.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
———, professor and dean	$2,500	207	76
———, instructor	1,000	249	363
———, instructor	1,200	328	310
———, instructor	900	200	379
———, associate professor	1,200	468	394
———, associate professor	1,600	125	55
———, associate professor	1,300	418	537
———, instructor	1,200	532	402
———, instructor	1,000	301	251
———, assistant professor (half time)	700	299	....
———, instructor	1,000	386	272
———, associate professor (half time)	750	339	....
———, instructor	1,000	386	322
———, instructor	1,000	488	356
———, assistant professor (two-thirds time)	1,000	179	174
———, instructor (half time)	700	....	402
———, associate professor (half time)	1,050	....	242
Total (15⅙)	19,100	4,905	4,535
Average	1,320	346	321

Classes.	Students in class.							
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70
Number of classes:								
First semester	1	2	51	30	10	2	3	1
Second semester	2	5	41	28	4	5	0	0

FARM CROPS.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (half time)	$3,000	309	525
——, instructor	1,300	142	157
——, instructor	1,200	420	192
——, assistant professor	2,000	550	272
——, associate professor	2,100	487	525
——, fellow (two-fifths time)	400	298	100
——, professor (half time, farm management)	1,200	[1] 315	....
——, fellow (two-fifths time)	200	105	....
——, fellow (two-fifths time)	300	....	101
——, scholar	200	....	21
Total ($7\frac{4}{15}$)	11,900	2,626	1,893
Average	1,630	387	320

Classes.	Students in class.						
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60
Number of classes:							
First semester	1	4	5	15	19	1	....
Second semester	2	3	4	21	6	....	1

[1] Experiment station.

HORTICULTURE.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor and vice dean (20/33 time)	$2,000	343	18
——, instructor	1,300	301	250
——, instructor	1,300	222	251
——, instructor	1,200	297	283
——, assistant professor	1,500	312	305
——, instructor	1,200	152	61
Total (5 20/33)	8,500	1,627	1,168
Average	1,500	286	206

Classes.	Students in class.							
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70
Number of classes:								
First semester	11	8	14	15	....	3	....	1
Second semester	13	5	9	11	1	....	....	....

MECHANICAL ENGINEERING.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (27/29 time)	$2,700	210	395
——, instructor	1,100	1,650	927
——, instructor	1,050	558	492
——, instructor	1,050	859	156
——, instructor	1,050	792	576
——, assistant professor	1,300	333	928
——, instructor	1,050	254	378
——, instructor	900	58	378
——, assistant professor	1,500	164	188
——, associate professor	2,200	231	170
——, assistant professor	1,500	259	235
——, associate professor	1,950	201	300
——, associate professor	1,900	331	265
——, associate professor	1,700	498	278
——, instructor	1,000	....	158
——, student assistant	200	....	253
Total (14 24/29)	22,150	6,398	6,075
Average	1,475	426	430

Classes.	Students in class.								
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80
Number of classes:									
First semester	10	7	34	13	9	8	1	1	1
Second semester	43	39	37	22	5	2	2	....	....

PHYSICS.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (14/15 time)	$2,800	609	....
——, instructor	1,100	246	88
——, assistant professor	1,300	114	240
——, assistant professor	1,500	418	342
——, assistant professor	1,500	225	517
——, instructor	1,000	274	236
——, instructor	1,000	74	248
——, instructor	1,200	275	86
——, assistant professor	1,400	125	177
——, instructor (half time)	500	....	252
Total (9 6/15)	13,300	2,360	2,186
Average	1,490	266	220

Classes.	Students in class.								
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	71 to 80	81 to 90	100 to 120	136 to 200
Number of classes:									
First semester	3	2	37	6	2	3	....	1	....
Second semester	2	14	57	3	....	1	3	....	2

ZOOLOGY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——— (eleven-thirteenths time)	$2,200	4	(1)
———, associate professor	2,000	180	484
———, instructor	1,000	326	375
———, associate professor (half time)	850	122	160
———, assistant professor	1,300	330	400
———, instructor (half time)	600	49	154
———, instructor (half time)	600	214	240
———, assistant professor	1,500	248	743
———, assistant professor	1,600	293	31
———, (one-tenth time)	50	.. ..	216
———, (one-tenth time)	65	217	....
Total (7⅜)	11,765	1,819	2,967
Averago	1,560	280	456

Classes.	Students in class.									
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	71 to 80	81 to 90	139
Number of classes:										
First semester	7	13	18	5	......	1	......	1	1	......
Second semester	21	14	31	7	2	1	6	1	1	2

[1] Sick.

MATHEMATICS.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
———, instructor	$1,200	274	302
———, instructor	1,300	233	318
———, associate professor	1,600	221	381
———, instructor	1,200	320	294
———, instructor (half time)	500	269	....
———, instructor	850	238	225
———, assistant (half time)	500	275	....
———, associate professor	1,600	297	250
———, associate professor	1,600	212	251
———, associate professor	1,600	286	243
———, instructor	1,300	307	231
———, instructor	1,000	267	208
———, professor (vice dean)	2,100	215	112
Total	16,350	3,414	2,815
Average	1,370	262	235

Classes.	Students in class.			
	1 to 5	6 to 10	11 to 20	21 to 30
Number of classes:				
First semester	3	0	32	11
Second semester	7	1	24	9

PUBLIC SPEAKING.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
———, instructor	$1,100	178	59
———, instructor	900	35	52
———, associate professor	1,400	264	224
Total	3,400	397	323
Average	1,133	132	108

Classes.	Students in class.			
	1 to 5	6 to 10	11 to 20	21 to 30
Number of classes:				
First semester	5	4	13	0
Second semester	1	5	9	1

FORESTRY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
———, associated professor	$1,800	157	200
———, instructor	1,400	248	200
———, professor (7/12 time)	1,300	....	16
Total	4,500	405	416
Average	1,740	160	164

Classes.	Students in class.				
	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50
Number of classes:					
First semester	3	4	2	0	2
Second semester	3	2	0	4	0

GEOLOGY AND MINING ENGINEERING.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
———, professor and vice dean (15/16 time)	$3,300	85	139
———, assistant professor	1,500	77	110
———, associate professor	2,200	84	56
Total (2.94)	7,000	256	305
Average	2,380	87	91

Classes.	Students in class.		
	1 to 5	6 to 10	11 to 20
Number of classes:			
First semester	10	3	1
Second semester	8	2	1

HISTORY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, assistant professor	$1,200	96	363
——, associate professor	2,250	93	252
Total	3,450	189	615
Average	1,725	95	308

Classes.	Students in class.				
	1 to 5	6 to 10	11 to 20	21 to 30	41 to 50
Number of classes:					
First semester	2	1	4	1	....
Second semester	....	1	1	4	4

SOILS.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor (half time)	$1,750	200	182
——, associate professor	2,100	413	436
——, assistant professor	1,600	464	191
——, instructor (half time)	600	464	191
——, professor (half time)	1,250	193	60
Total (3½)	7,300	1,734	1,060
Average	2,090	495	304

Classes.	Students in class								
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	81 to 90
Number of classes:									
First semester	2	2	3	2	5	1	2	....	1
Second semester	11	4	5	3	1	1	....	1	....

MODERN LANGUAGES.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor	$2,250	114	63
——, instructor	1,200	292	208
——, instructor	1,200	210	175
——, instructor	1,200	278	228
——, instructor	1,200	247	275
——, instructor	1,200	260	331
Total	7,950	1,401	1,280
Average	1,325	234	313

MODERN LANGUAGES—Continued.

Classes.	Students in class.				
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40
Number of classes:					
First semester	6	2	9	5	....
Second semester	7	6	16	2	1

MUSIC.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, associate professor (half time)	$800	116	274
——,	200	....	62
Total	1,000	116	336
Average	....	232	376

Classes.	Students in class.					
	1 to 5	6 to 10	21 to 30	31 to 40	41 to 50	51 to 60
Number of classes:						
First semester	....	2	....	1	1	1
Second semester	5	....	2	1	1	2

PSYCHOLOGY.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, professor and chaplain	$3,000	92	126
——, assistant professor	1,500	464	297
Total	4,500	556	423
Average	2,250	278	211

Classes.	Students in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	51 to 60
Number of classes:						
First semester	....	....	2	1	2	1
Second semester	1	2	5	1	1	....

STRUCTURE DESIGN.

Instructor.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, associate professor	$2,500	115	443

Classes.	Students in class.			
	1 to 5	6 to 10	11 to 20	21 to 30
Number of classes:				
First semester	3	3	2	0
Second semester	5	2	0	2

VETERINARY MEDICINE.

Instructors.	Salary.	Student clock hours.	
		First semester.	Second semester.
——, instructor	$1,200	252	254
——, associate professor	2,000	317	299
——, professor	2,250	798	482
——, associate professor	1,900		184
——, instructor	1,200	576	279
——, instructor (two-fifths time)	400	120	40
——, professor	2,250	320	211
——, professor and vice dean	2,600	175	230
——, assistant professor	1,800	100	148
——, dean (five-eighths time)	3,000	57	....
Total	18,600	2,715	2,127
Average	2,065	302	236

Classes.	Students in class.								
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	51 to 60	61 to 70	71 to 80	81 to 90
Number of classes:									
First semester	4	2	10	7	2	1	2	1	1
Second semester	3	....	13	8	2	....	....	1	....

INSTRUCTORS AND STUDENT CLOCK HOURS.

First semester:	
Number of instructors	189.6
Number of student clock hours	61,069
Average number of student clock hours	322
Second semester:	
Number of instructors	190.8
Number of student hours	58,354
Average number of student hours	305

IOWA STATE TEACHERS COLLEGE.

EDUCATION.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
———, professor	$2,700	560	420	310	540
———, professor	1,400	940	620	780	505
———, professor	2,000	....	390	465	345
———, professor	2,000	720	660	525	614
———, professor	1,300	....	555	595	475
———, professor	1,900	380	640	650	405
———, professor	1,800	....	460	365	515
Total (7)	13,100	2,600	3,745	3,690	3,399
Average	1,871	650	535	527	485

Classes.	Number of students.						
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60
Number of classes	0	2	4	8	10	2	[illegible]

TEACHING.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
———	$2,400	....	[1] 1	....	....
———	1,300	154	136	143	141
———	1,300	154	136	147	158
———	650	185	133	150	417
———	1,200	154	111	140	155
———	850	....	265	270	397
———	....	[2] 1,305	....	....	....
———	1,100	....	91	108	121
———	1,100	154	141	130	162
———	1,100	....	20	30	54
———	1,000	....	140	95	96
———	1,400	185	133	150	417
———	1,400	....	265	270	397
Total (12)	14,800	2,291	1,571	1,633	2,515
Average	1,233	327	143	148	229

ENGLISH.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
———, professor	$2,300	410	418	320	279
———, professor	1,500	365	367	600	492
———, professor	2,000	340	463	402	399
———, professor	1,700	440	310	490	350
———	1,500	....	277	366	364
———	1,700	214	303	197	276
———	1,300	....	392	380	405
Total (7)	12,000	1,769	2,530	2,755	2,565
Average	1,714	354	361	393	366

[1] Director.

[2] Lectures and demonstration teaching.

ENGLISH—Continued.

Classes.	Number in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50
Number of classes	1	4	9	6	2	1

LATIN.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——	$2,300	100	141	160	167
——	1,400	120	190	205	145
Total (2)	3,700	220	331	365	312
Average	1,850	110	165	183	156

Classes.	Number in class.		
	1 to 5	6 to 10	11 to 20
Number of classes	3	5	2

GERMAN AND FRENCH.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——	$2,300	325	375	365	345
——	1,100	190	295	290	120
Total (2)	3,400	515	670	655	465
Average	1,700	258	335	328	233

Classes.	Number in class.				
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40
Number of classes	2	2	½	2	1

MATHEMATICS.

Instructor.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——	$2,300	595	245	219	220

Classes.	Number in class.			
	1 to 5	6 to 10	11 to 20	21 to 30
Number of classes	1	1	3	1

PHYSICS AND CHEMISTRY.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——	$2,300	736	164	168	202
——	1,500		503	377	273
——		157			
——	1,200	151	458	259	239
——	1,300		140	84	245
Total (5)	6,300	1,044	1,265	888	959
Average	1,575	348	316	222	240

Classes.	Number in class.			
	1 to 5	6 to 10	11 to 20	21 to 30
Number of classes	4	1	5	3

NATURAL SCIENCES.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——	$2,100	217	567	253	1,162
——	2,000	1,110	427	660	734
——	1,900	746	448	287	511
——	1,400	529	344	126	579
Total	7,400	2,602	1,786	1,326	2,986
Average	1,850	650	446	331	746

Classes.	Number in class.						
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60
Number of classes	⅓	3	3	3	2	1	⅔

HISTORY.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——	$1,500	410	405	285	196
——	1,400	390	475	500	610
Total	2,900	800	880	785	806
Average	1,450	400	440	393	403

Classes.	Number in class.					
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50
Number of classes	⅓	1	3	2	2	⅓

GOVERNMENT.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——	$2,200	766	287	180	206

Classes.	Number in class.			
	6 to 10	11 to 20	21 to 30	31 to 40
Number of classes	2	1	½	½

ECONOMICS.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——	$1,800	467	321	436	306

Classes.	Number in class.	
	11 to 20	21 to 30
Number of classes	2	2

ART.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——	$1,500	460	90	195	225
——	1,400	375	175	330	350
——	1,100	....	270	535	330
——	....	640	....	....	....
Total	4,000	1,475	535	1,060	905
Average	1,333	492	178	353	301

Classes.	Number in class.				
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40
Number of classes	1	4	3	3	½

MUSIC.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——..	$2,300	770	626	240	402
——..	1,300	....	334	224	68
——..	1,500	....	146	473	239
Total..	5,100	770	1,106	937	709
Average..	1,700	770	368	312	236

Classes.	Students in class.						
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60
Number of classes..............................	1	2	3	2	1	⅓	1

MANUAL ARTS.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——..	$2,300	215	135	193	304
——..	1,300	293	229	367	407
Total..	3,600	508	364	560	711
Average..	1,800	254	182	280	356

Classes.	Number in class.			
	1 to 5	6 to 10	11 to 20	21 to 30
Number of classes..	1	4	3	1

HOME ECONOMICS.

Instructors.	Salary.	Student clock hours.			
		Summer.	Fall.	Winter.	Spring.
——..	$1,600	280	286	340	254
——..	900	300	220	254	261
——..	....	336	280	....	....
——..	1,000	....	187	299	200
Total..	3,500	916	973	893	715
Average..	1,166	305	243	298	238

Classes.	Number in class.				
	1 to 5	6 to 10	11 to 20	21 to 30	31 to 40
Number of classes..	⅓	2	11	3	⅔

APPEN

ANALYSIS OF EXPENDITURES

Iowa State Teachers College, total expenditures, 1913-14, $298,808.65.	Teachers College, exclusive of extension work, $298,488.65.	Construction and land, $58,885.81.	Training school	$39,050.49
			Library	564.64
			Power house	16,243.40
			Dormitory	401.05
			Paving and walks	549.19
			Furnishing new building	2,077.04
				58,885.81
		Special funds $1,649.33	Operating hospital	1,644.33
			Fees refunded	5.00
				1,649.33
		Total operating expenses, $237,953.51		
	Extension and industrial service, $320.	Study center work (extension)		$320.00

DIX G.

AT IOWA STATE INSTITUTIONS.

Education, equipment and supplies, $22,707.06.	Library books and supplies	$6,955.61
	Home economics	3,044.45
	Physics and chemistry	1,496.11
	Training school	2,070.79
	Natural science	1,987.24
	Music	2,659.65
	Orchestra	626.16
	General use of department	2,711.80
	Manual training	388.95
	Other departments	766.30
		22,707.06

Instruction, $139,984.63	Education	$13,550.00
	Teaching	19,214.01
	English	17,500.00
	Latin and Greek	3,700.00
	German and French	4,200.00
	Mathematics	7,500.00
	Physics and chemistry	8,560.00
	Natural science	9,933.33
	History	2,910.00
	Government	3,300.00
	Home economics	5,950.00
	Economics	1,700.00
	Music	7,220.00
	Art	3,373.33
	Commercial education	2,820.00
	Manual arts	4,500.00
	Physical education	5,930.00
	Balance, salaries	188.97
		122,049.64
	Summer term	17,934.99
		139,984.63

		Salaries.	Labor, equipment, supplies.
General operating expenses, $75,261.82.	Administration	$16,192.33	$1,904.39
	Library	7,760.81	....
	Commencement	....	983.76
	Superintendent buildings and assistant	3,609.96	....
	Janitors and grounds	10,071.60	1,000.00
	Engineer and firemen	4,226.00	2,000.00
	Fuel	....	10,881.68
	Repairs	1,800.00	10,349.24
	Printing	....	2,664.29
	Advertising	....	1,501.23
	Telephone and telegraph	....	316.53
		43,660.70	31,601.12

Iowa State Teachers College, total expenditures, 1914-15, $357,598.33.	Teachers College, exclusive of extension work, $349,495.82.	Construction and land, $86,013.52.	Training school	$607.98
			Power house	2,415.09
			Dormitory	72,084.87
			Vocational building	8,879.94
			Furnishing new building	938.29
			Paving and walks	1,087.35
				86,013.52
		Special funds, $1,779.93.	Operating hospital	1,779.93
		Total operating expenses, $261,702.37		
	Extension and industrial service, $8,102.51	Study center work (extension)		$8,102.51

Education, equipment, and supplies, $19,745.08.	Library books and supplies	$7,747.07
	Home economics	2,767.08
	Physics and chemistry	1,391.25
	Training school	1,441.61
	Natural science	1,210.66
	Music and orchestra	1,143.46
	Manual training	677.61
	Physical education	617.47
	Rural education	1,043.08
	General use of department	1,341.71
	Other departments	364.18
		19,745.08

Instruction, $158,581.60	Education	$13,100.00
	Teaching	19,698.75
	English	18,125.00
	Latin and Greek	3,700.00
	German and French	4,300.00
	Mathematics	7,500.00
	Physics and chemistry	9,975.00
	Natural science	11,530.50
	History	2,900.00
	Government	3,600.00
	Home economics	7,435.00
	Economics	3,000.00
	Music	8,280.00
	Art	4,040.00
	Commercial education	2,900.00
	Manual arts	4,620.00
	Physical education	6,550.00
	Rural education	6,632.50
		137,886.75
	Summer term	20,694.85
		158,581.60

		Salaries.	Labor, equipment, supplies.
General operating expenses, $83,375.69.	Administration	$19,385.00	$2,961.32
	Library	10,359.39	....
	Commencement	....	981.55
	Superintendent buildings and assistant	2,700.00	....
	Janitor and grounds	10,302.00	1,000.00
	Engineer and firemen	4,267.00	2,000.00
	Fuel	....	13,017.08
	Repairs	3,465.00	9,092.80
	Printing	....	2,808.23
	Advertising	....	663.30
	Telephone and telegraph	....	373.02
		50,478.39	32,897.30

The University of Iowa, total expenditures, 1913-14, $944,058.75.	State University, exclusive of extension and service, $933,759.86.	Construction and land, $212,766.33.	Hospital	$47,547.37
			Currier Hall	84,643.64
			Annual House	13,582.25
			Chemical building	7,931.55
			Storehouse	3,127.76
			Other buildings	1,688.93
			Equipping new buildings	28,142.52
			Land purchases	12,395.59
			Tunnel	8,713.73
			Paving and walks	4,992.99
				212,766.33
		Special funds, $82,275.94.	Hospital	$50,235.84
			Homeopathic hospital	8,025.92
			Currier Hall	19,267.80
			Law loan books	168.40
			Storehouse	1,880.93
			Tuition refund	25.00
			Carr fund	2,330.00
			Gifford fund	182.05
			Lowden fund	150.00
			Bryan fund	10.00
				82,275.94
		Total operating expenses, $638,717.59		
	Extension and industrial service work, $10,298.89.	Epidemiologist		$3,276.98
		University extension		7,021.91
				10,298.89

Educational equipment and supplies, $95,406.15.	Library books and supplies	$21,006.73
	College of arts	22,354.73
	College applied science	12,527.92
	College of law	500.12
	College of medicine	11,232.93
	Hospital deficit	11,408.17
	College of homeopathic medicine	77.61
	Homeopathic Hospital deficit	1,090.50
	College of dentistry	11,886.19
	College of pharmacy	1,913.05
	Graduate college	371.03
	Fine arts	891.70
	Summer session	145.47
		95,406.15

Instruction, $364,413.08	College of arts	$183,008.00
	College of applied science	34,880.00
	College of law	23,975.00
	College of medicine	58,769.51
	College of homeopathic medicine	5,300.00
	College of dentistry	25,100.00
	College of pharmacy	5,600.00
	College of fine arts	6,200.00
	Music, tuitions	6,412.22
	Graduate college	5,520.00
		354,764.73
	Summer term	9,648.35
		364,413.08

		Salaries.	Labor, equipment, supplies.
General operating expenses, $178,898.36.	Administration	$22,915.58	$4,754.82
	Library	7,123.32	....
	Commencement and general lectures	2,321.35	....
	Superintendent building, assistant	6,332.59	82.98
	Janitors	21,069.74	3,247.95
	Engineer and firemen	9,158.05	1,329.99
	Fuel	....	31,712.77
	Repairs	....	30,033.99
	Printing	....	5,059.38
	Advertising	....	2,569.84
	Telephone and telegraph	....	1,184.71
	Gas, water, electricity, ice	....	6,405.69
	Postage	....	3,634.00
	Miscellaneous	....	16,214.90
	Alumni secretary and bulletin	2,720.00	1,026.71
		71,640.63	107,257.73

The University of Iowa, total expenditures, 1914-15, $1,017,805.72.	State University, exclusive of extension and service, $994,471.19.	Construction and land, $238,132.28.	Hospital	$62,860.79
			Nurses' home	48,508.39
			Men's gymnasium	29,273.85
			Women's gymnasium	40,389.84
			Equipment new building	29,956.18
			Other building equipment	4,085.27
			Other buildings	2,430.67
			Paving and walks	5,192.51
			Tunnel	1,372.12
			Land	14,112.66
				238,132.28
		Special funds, $97,725.57.	Hospital	$50,114.43
			Homeopathic Hospital	9,022.45
			Currier Hall	31,698.25
			Law loan book	263.49
			Storeroom	3,730.70
			Tuition refund	170.25
			Carr fund	2,485.00
			Gifford fund	71.00
			Lowden fund	150.00
			Bryan fund	20.00
				97,725.57
		Total operating expenses, $658,613.34		
	Extension and industrial service work, $23,334.53.	Epidemiologist		$5,904.03
		University extension		17,430.50
				23,334.53

Educational equipment and supplies, $100,532.91.

Library books and supplies	$18,776.13
College of Arts	21,671.78
College of Applied Science	13,280.65
College of Law	1,162.08
College of Medicine	12,593.85
Hospital deficit	12,868.35
College of Homeopathic Medicine	125.49
Homeopathic Hospital deficit	1,787.57
College of Dentistry	13,748.42
College of Pharmacy	2,003.96
Graduate College	384.58
Fine Arts	1,304.47
Summer session	825.64
	100,532.91

Instruction, $388,233.74

College of Arts	$193,528.28
College of Applied Science	37,821.30
College of Law	23,350.00
College of Medicine	63,240.18
College of Homeopathic Medicine	5,300.00
College of Dentistry	27,059.99
College of Pharmacy	6,615.00
College of Fine Arts	4,545.00
Music, tuitions	9,555.75
Graduate College	6,800.00
	377,815.50
Summer term	10,418.24
	388,233.74

General operating expenses, $169,846.69.

	Salaries.	Labor, equipment, supplies.
Administration	$25,371.73	$6,415.75
Library	7,380.00	....
Commencement and general lectures	2,379.19	....
Superintendent buildings, assistant	6,392.66	124.10
Janitors	22,896.12	2,721.96
Engineers and firemen	7,351.82	1,309.59
Fuel	....	25,841.42
Repairs	....	30,257.45
Printing	....	4,181.28
Advertising	....	2,511.62
Telephone and telegraph	....	1,287.11
Gas, water, electricity, ice	....	4,334.93
Postage	....	3,735.00
Miscellaneous	....	11,973.46
Alumni secretary and bulletin	2,840.00	542.00
	74,611.02	95,235.67

Iowa State College of Agriculture and Mechanic Arts, total expenditures, 1913–14, $1,461,684.25.

- State College, exclusive of extension and service, $1,037,833.47.
  - Construction and land, $317,978.63.

Gymnasium	$3,040.71
Chemistry building	172,282.28
"Emergency"	4,040.42
Mechanical engineering building	40,051.96
Transportation building	49,801.69
Heating plant	18,941.60
Margaret Hall Annex	5,617.00
Sewage plant	4,072.74
Other buildings	6,007.02
Improvement of grounds	14,123.21
	317,978.63

  - Special funds, $95,846.55.

Agricultural engineering	$861.68
Dairy	28,995.23
Farms	19,238.33
Horticulture	2,735.09
Veterinary hospital	2,281.39
Other departments	8,948.18
Operating hospital	9,886.60
Operating storeroom	10,603.89
Women's dormitory	4,277.05
School fund	1,362.50
Fees refunded	6,656.61
	95,846.55

  - Total operating expenses, $624,008.29

- Extension and industrial service work, $424,850.78.
  - Construction, $42,874.10

Serum plant and equipment	$21,750.77
Land purchased	21,123.33
	42,874.10

  - Special funds, $142,444.59.

Agricultural experiment station	$15,028.11
Engineering experiment station	1,582.64
Agricultural extension	761.43
Serum fund	125,072.41
	142,444.59

  - Operating expenses, $239,532.09

Educational equipment and supplies, $144,974.02.	Library books and supplies	$6,958.96
	Agricultural division	59,241.35
	Agricultural engineering	4,529.02
	Engineering division	25,715.44
	Home economics	20,883.08
	Veterinary medicine	8,008.62
	Industrial science	3,120.64
	Noncollegiate	14,303.81
	Veterinary practical course	588.56
	Summer term	1,624.54
		144,974.02

Instruction, $313,158.01	Agriculture	$106,006.17
	Agricultural engineering	12,420.99
	Engineering	78,627.77
	Home economics	52,699.24
	Veterinary medicine	16,854.73
	Industrial science	7,547.22
	Noncollegiate	31,647.95
		305,804.07
	Summer session	7,353.94
		313,158.01

		Salaries.	Labor, equipment, supplies.
General operating expenses, $165,876.26.	Administration	$27,350.00	$8,282.58
	Library	6,712.43	....
	Commencement and general lectures		2,053.23
	Janitors	14,726.75	1,641.26
	Engineers and firemen	9,786.78	10,113.54
	Fuel		36,318.37
	Repairs and contingent		39,034.51
	Printing and advertising		5,495.33
	Care grounds	989.63	3,371.85
		59,565.59	106,310.67

Experimental work, $145,544.09.	Agriculture	$51,173.46	$62,990.32
	Engineering	6,195.71	7,067.07
	Good roads	4,166.48	4,962.36
	Veterinary	2,328.43	6,660.26
		63,864.08	81,680.01
Extension work, $93,988.	Agriculture	$43,673.51	$29,770.12
	Engineering	8,435.86	5,964.91
	Hog cholera serum	6,143.60	....
		58,252.97	35,735.03

Iowa State College of Agriculture and Mechanic Arts, total expenditures, 1914-15, $1,599,430.41.	State college, exclusive of extension and service, $1,150,081.67.	Construction and land, $338,336.52.	Chemical building	$128,892.22
			Women's dormitory	52,096.52
			Plant industry building	57,038.13
			Steam and gas laboratory	13,989.84
			Transportation building	22,247.24
			Central heating plant	32,569.47
			Dormitory annex	10,494.86
			Other buildings	4,509.94
			Grounds, improvement	16,498.30
				338,336.52
		Total operating expenses, $687,144.73.		
		Special funds, $124,600.42.	Agricultural education	$2,418.86
			Dairy	38,500.71
			Farms	23,918.81
			Horticulture	3,594.07
			Veterinary hospital	2,933.29
			Other department sales	14,355.34
			Hospital	10,168.28
			Storeroom	10,383.88
			Dormitories	9,995.31
			Scholarships	1,924.96
			Fees refunded	6,406.91
				124,600.42
	Extension and industrial service work, $449,348.74.	Construction and land, $14,778.21.	Land purchased	$10,875.00
			Drainage and fence	3,903.21
				14,778.21
		Operating expenses, $294,228.82.		
		Special funds, $140,341.71	Agricultural experiment station	$19,815.91
			Engineering experiment station	1,270.22
			Veterinary investigation	225.67
			Agricultural extension	1,038.48
			Engineering extension	1,319.75
			Serum fund	116,671.68
				140,341.71

Educational equipment and supplies, $172,218.11.	Library books, supplies	$7,844.52
	Agricultural division	63,207.74
	Agricultural engineering	5,096.51
	Engineering	30,523.53
	Home economics	25,868.10
	Veterinary medicine	7,172.51
	Industrial science	3,157.83
	Noncollege	24,666.87
	Veterinary practice course	1,588.77
	Summer session	3,092.73
		172,218.11

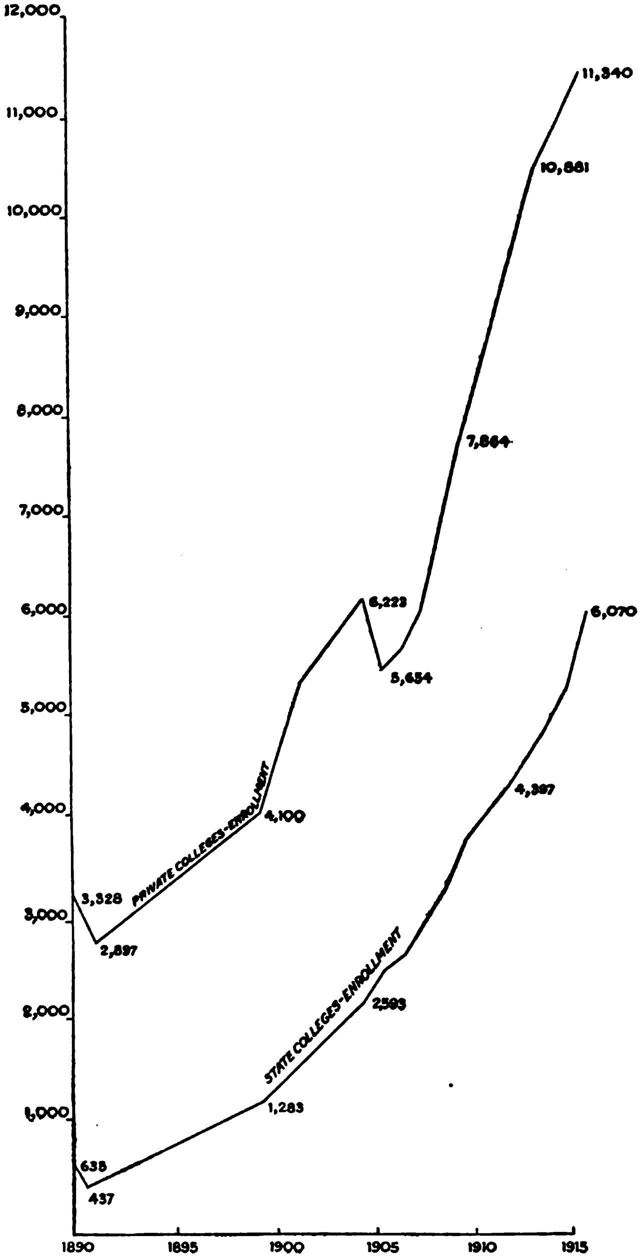
Instruction, $362,291.87	Agriculture	$122,918.01
	Agricultural engineering	14,137.25
	Engineering	90,735.02
	Home economics	64,060.63
	Veterinary medicine	19,922.39
	Industrial science	8,773.29
	Noncollegiate	31,747.23
		352,293.82
	Summer term	9,998.05
		362,291.87

		Salaries.	Labor, equipment, supplies.
General operating expenses, $152,634.75.	Administration	$28,201.33	$9,347.00
	Library	7,283.32	....
	Sunday and general lectures		2,635.98
	Janitors	16,927.40	2,196.16
	Engineers and firemen	9,682.09	10,414.53
	Fuel		30,227.47
	Repairs and construction		25,661.22
	Advertising		5,112.43
	Care grounds	1,701.51	3,244.31
		63,795.65	88,839.10

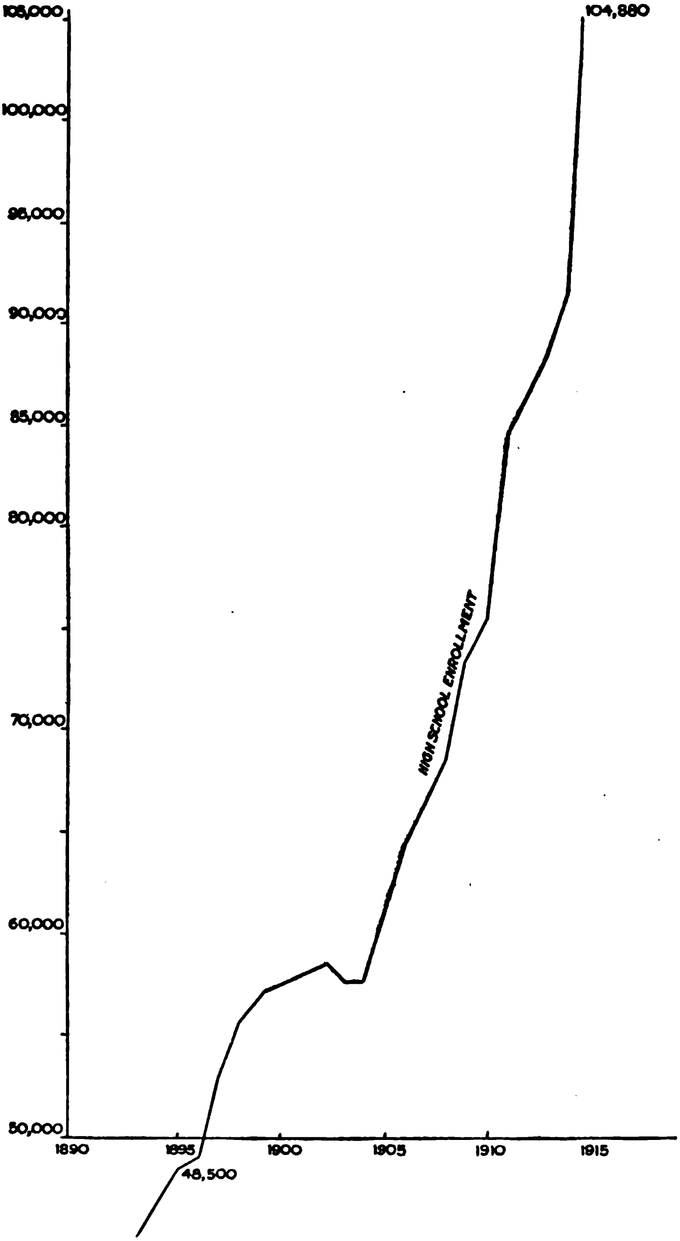
Experimental work, $163,883.32.	Agriculture	$60,895.69	$68,727.78
	Engineering	8,838.86	6,046.27
	Good roads	5,670.25	6,780.35
	Veterinary	1,432.58	5,491.54
		76,837.38	87,045.94
Extension work, $130,345.50.	Agriculture	$55,753.43	$41,913.08
	Engineering	10,558.50	6,753.58
	Hog cholera serum	7,233.32	8,133.59
		73,545.25	56,800.25

APPENDIX H.

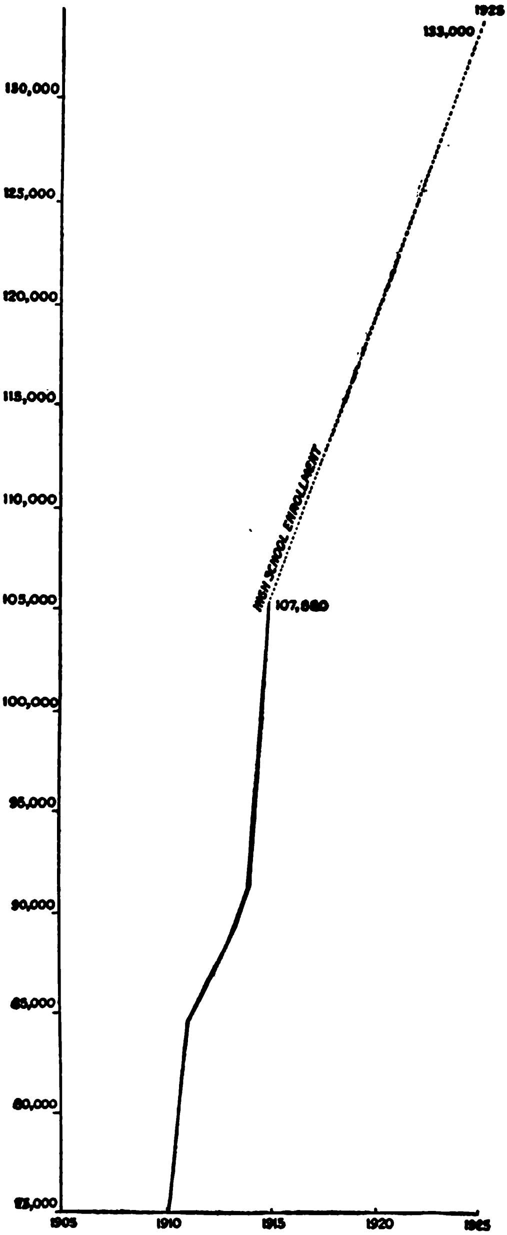
DIAGRAMS AND OUTLINE MAPS.



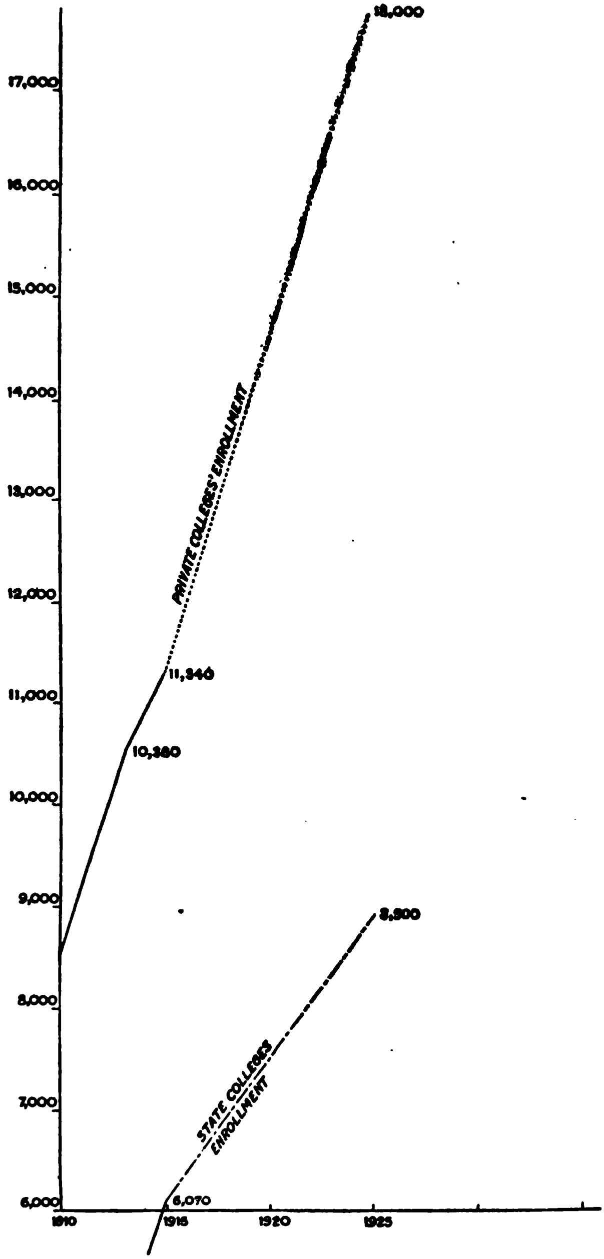
Private and State College enrollment, Ohio.



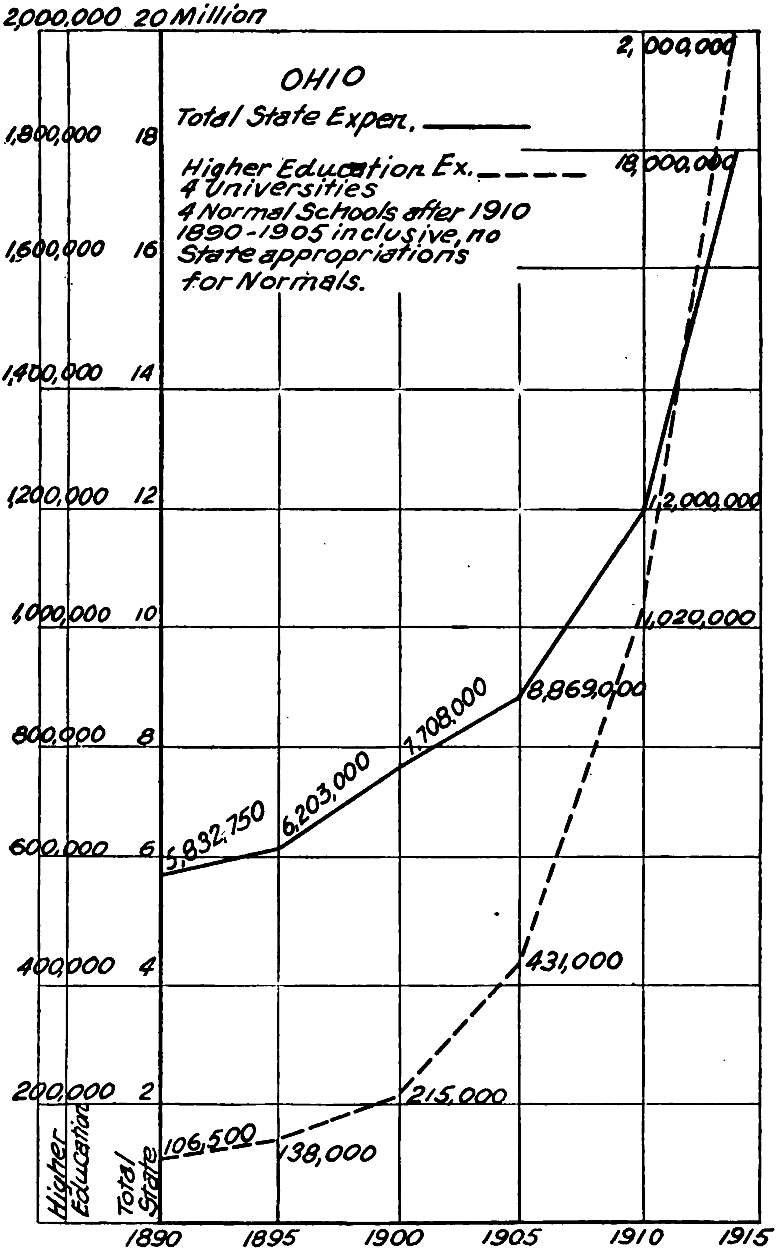
Growth of high-school enrollment, Ohio, 1890–1915.



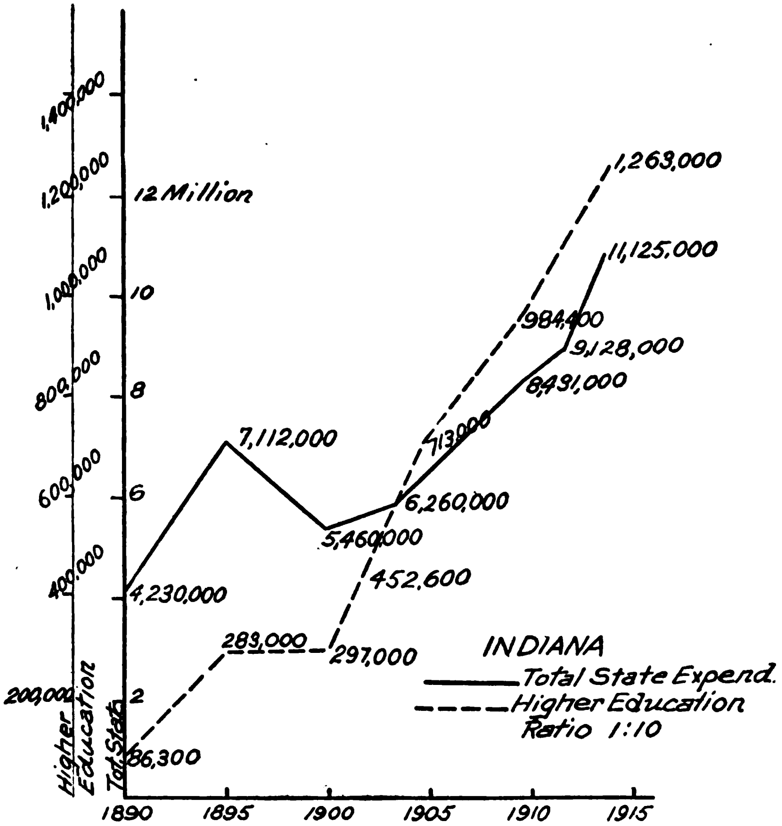
Forecast of high-school enrollment in Ohio.



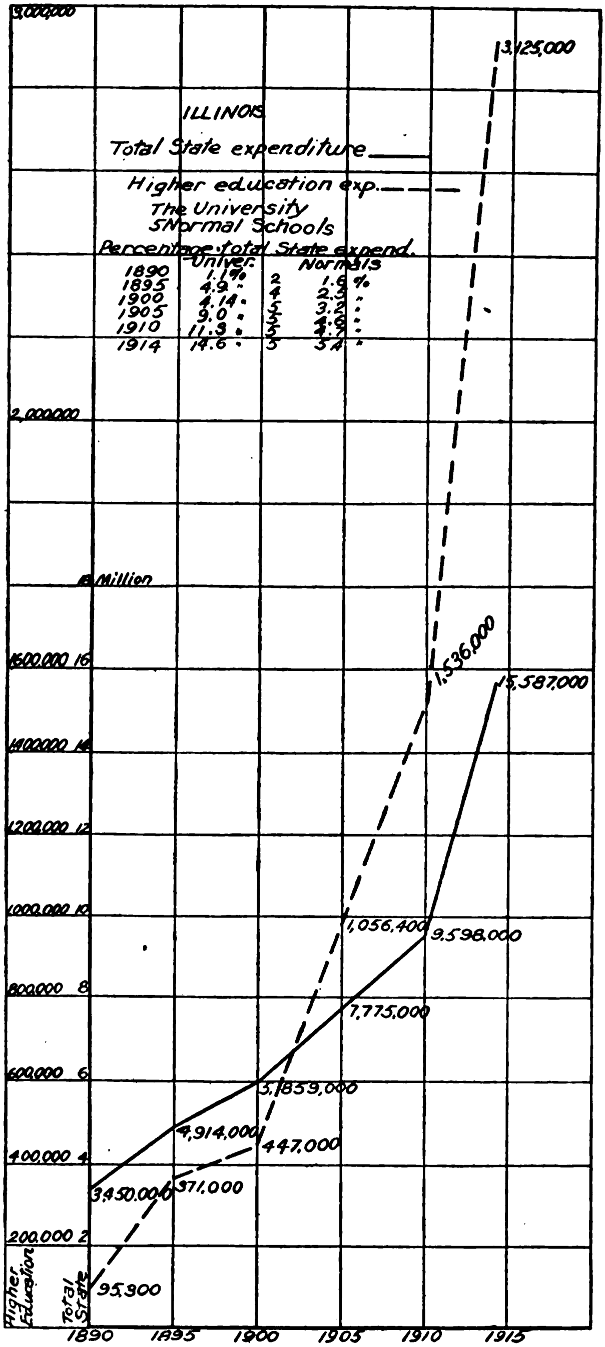
Forecast of private and State College enrollment in Ohio.



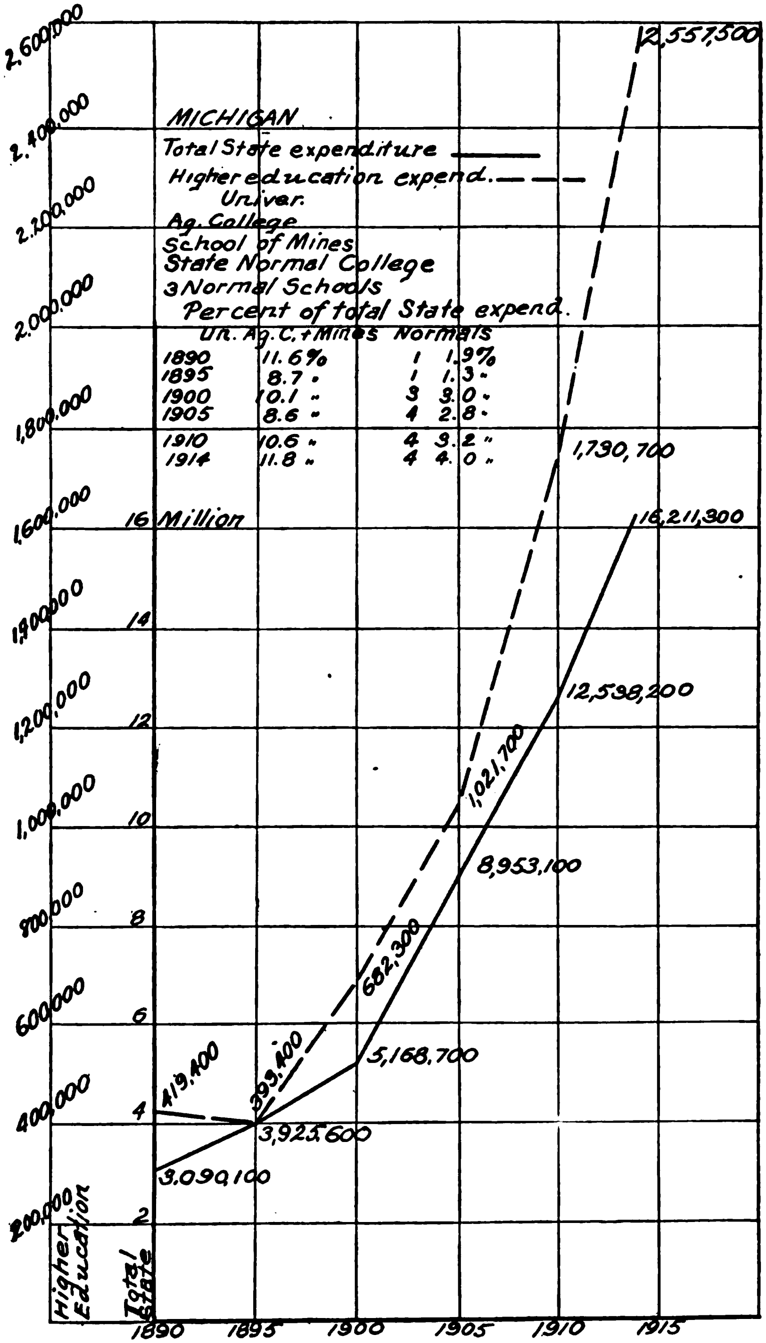
State expenditures for higher education in Ohio compared with total State expenditures.



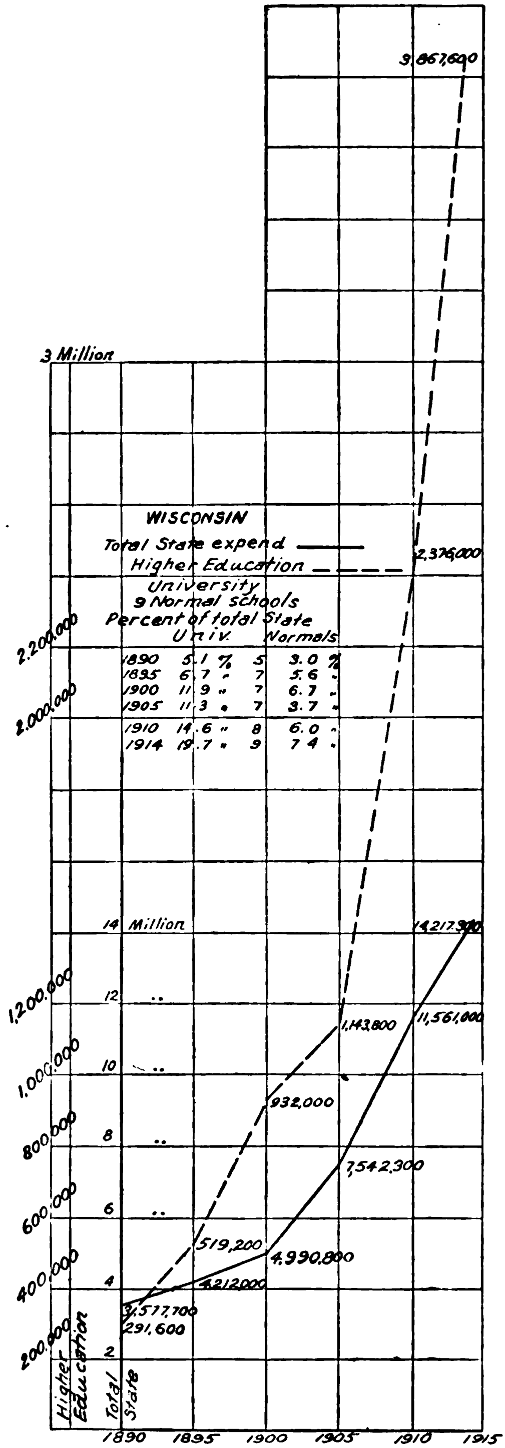
State expenditures for higher education in Indiana compared with total State expenditures.



State expenditures for higher education in Illinois compared with total State expenditures.



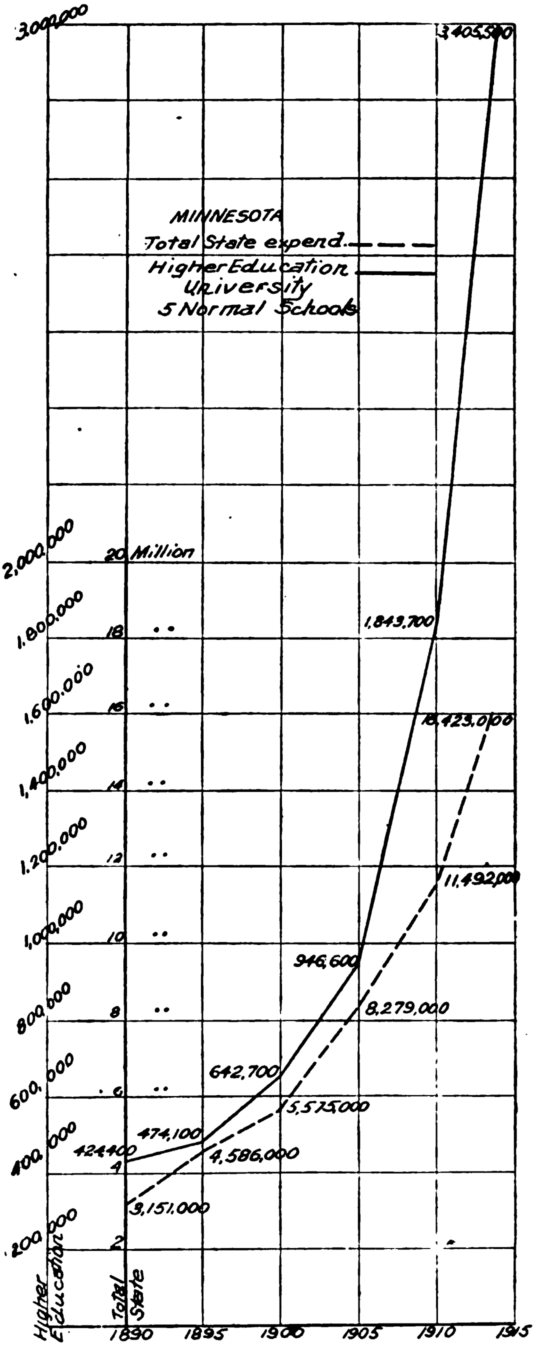
State expenditures for higher education in Michigan compared with total State expenditures.



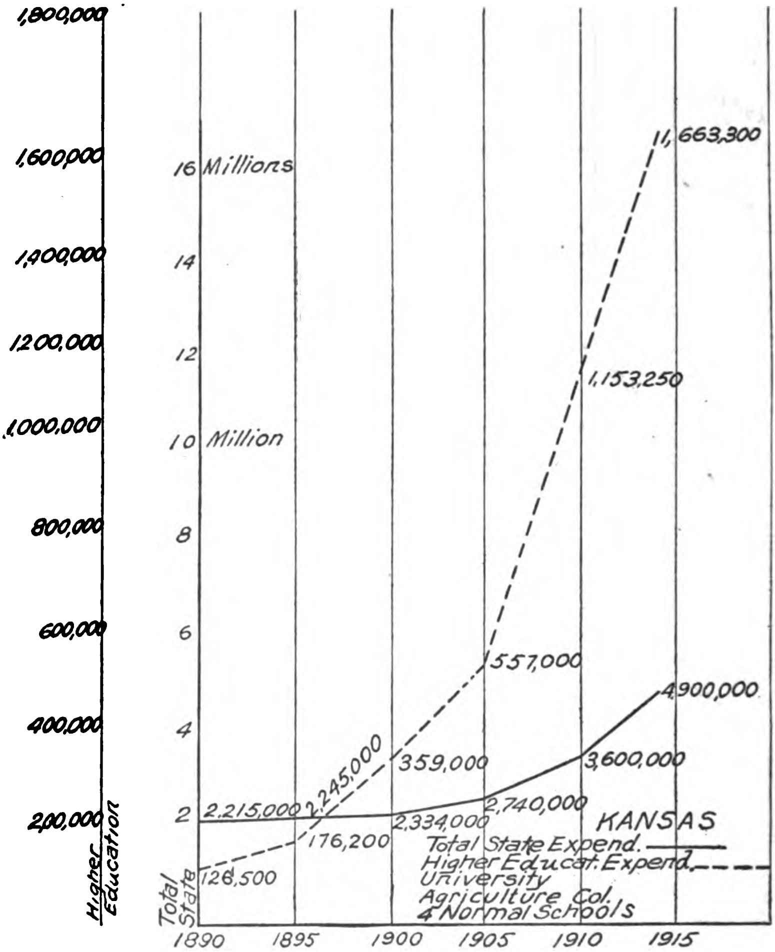
Percent of total State

	Univ.		Normals
1890	5.1 %	5	3.0 %
1895	6.7 "	7	5.6 "
1900	11.9 "	7	6.7 "
1905	11.3 "	7	3.7 "
1910	14.6 "	8	6.0 "
1914	19.7 "	9	7.4 "

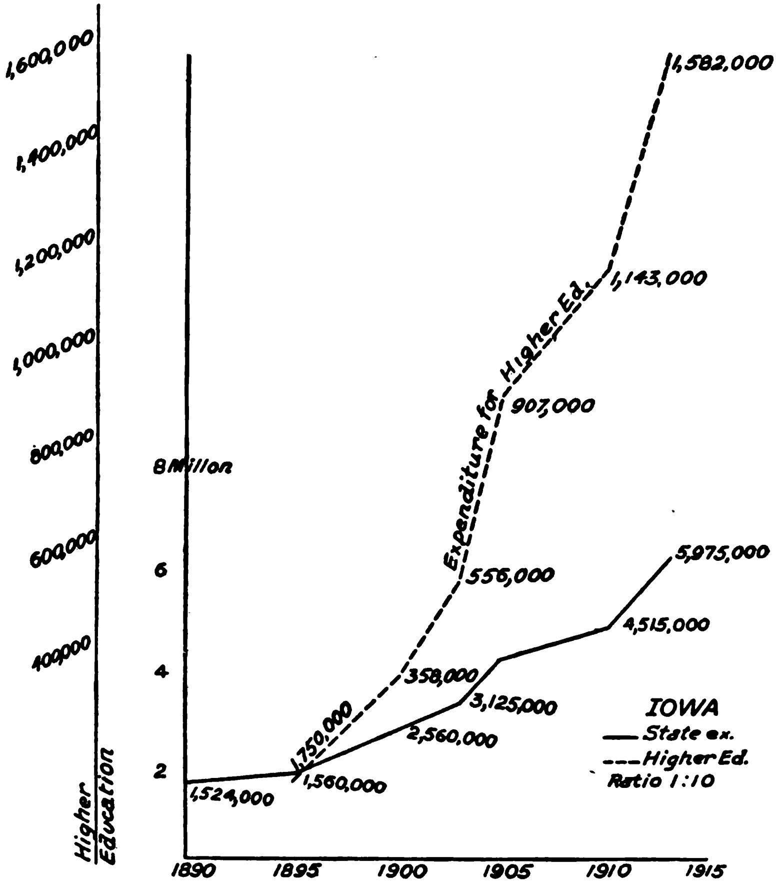
State expenditures for higher education in Wisconsin compared with total State expenditures.



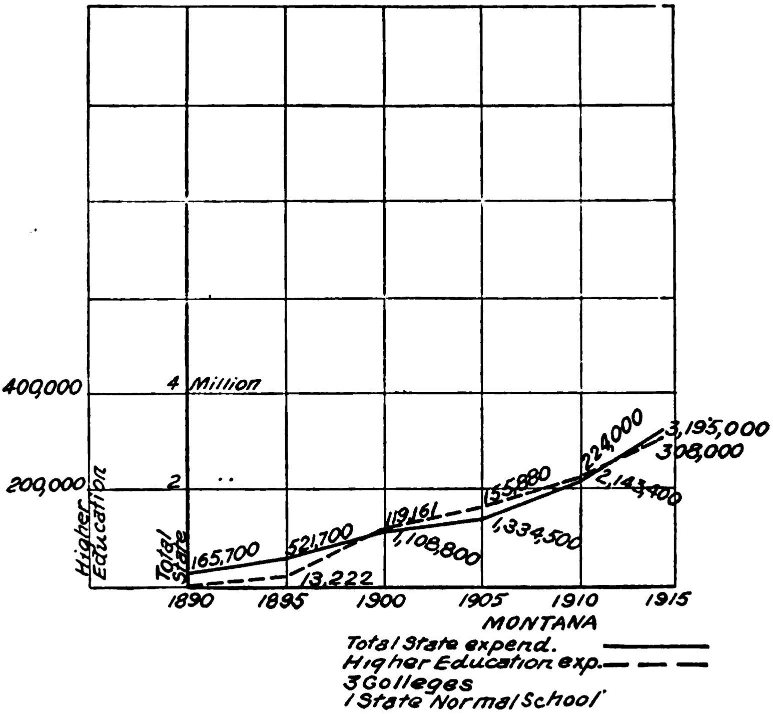
State expenditures for higher education in Minnesota compared with total State expenditures.



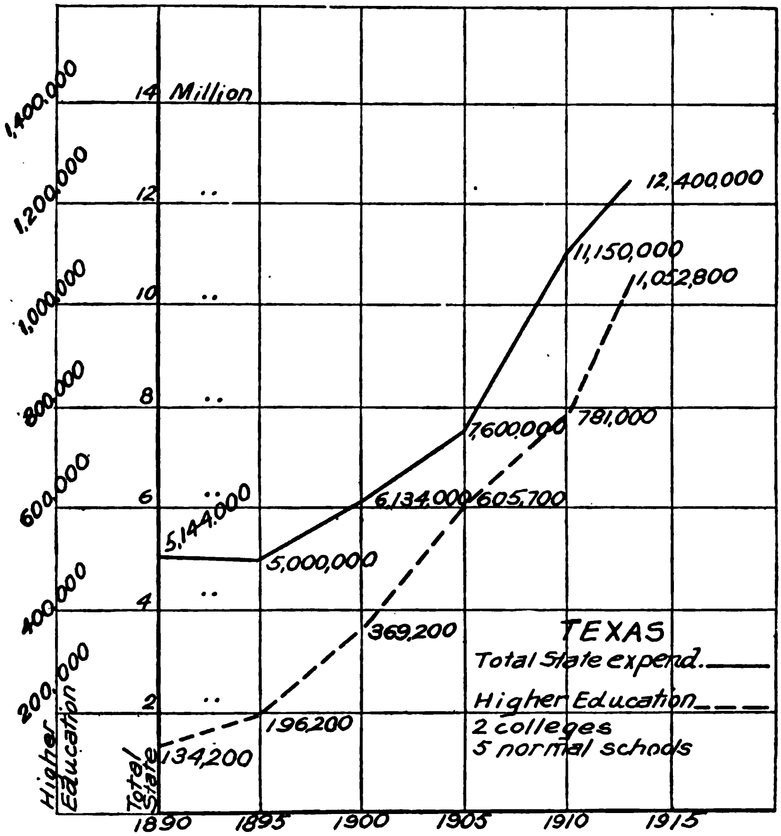
State expenditures for higher education in Kansas compared with total State expenditures.



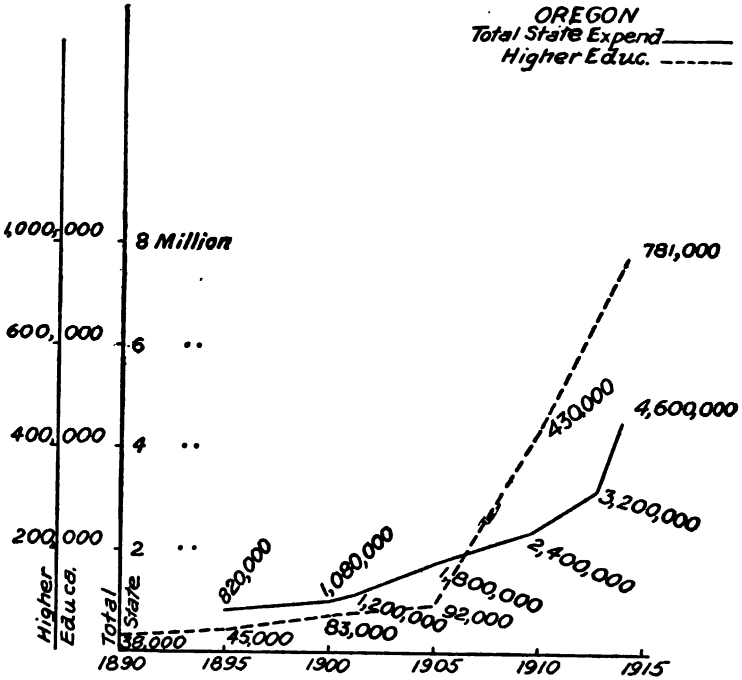
State expenditures for higher education in Iowa compared with total State expenditures.



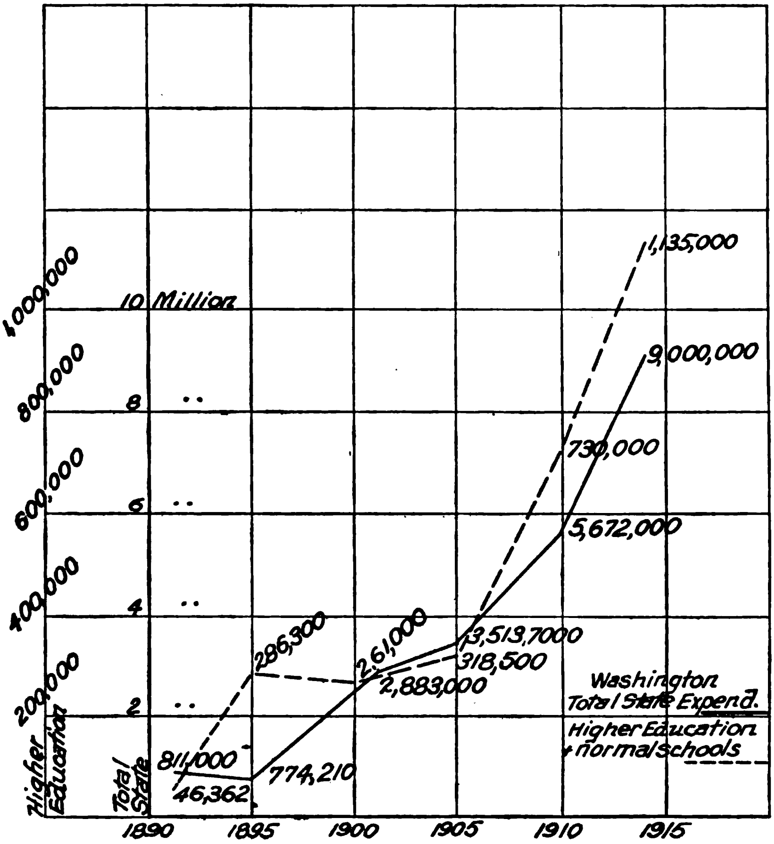
State expenditures for higher education in Montana compared with total State expenditures.



State expenditures for higher education in Texas compared with total State expenditures.



State expenditures for higher education in Oregon compared with total State expenditures.



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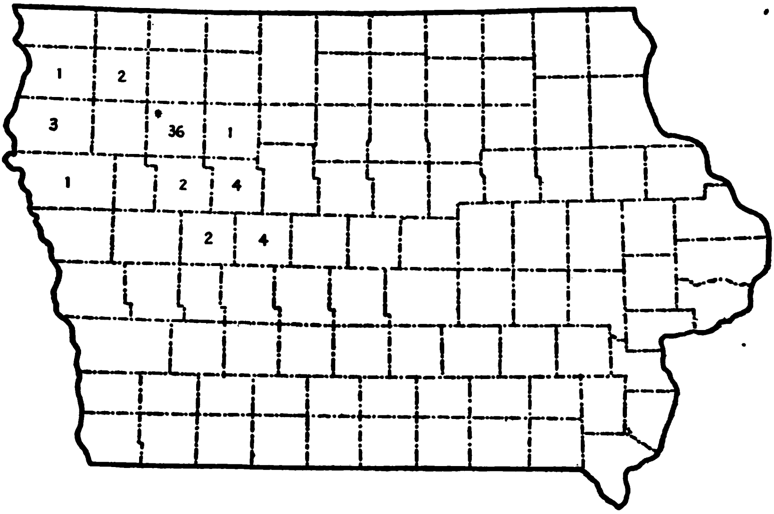

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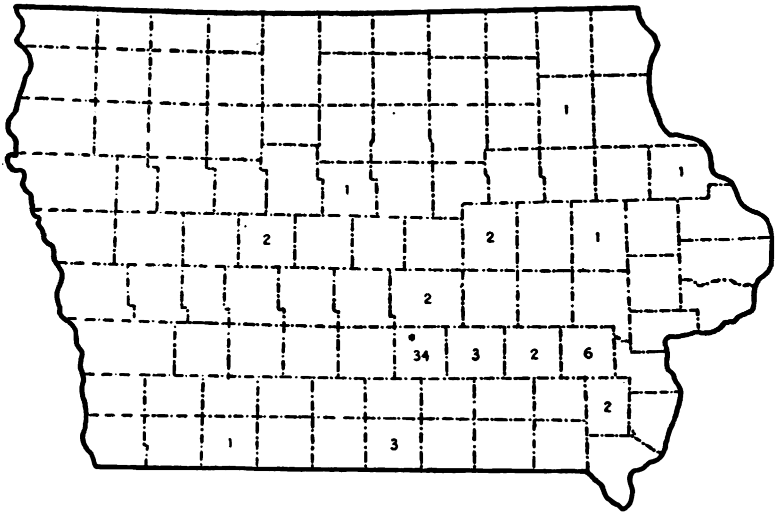
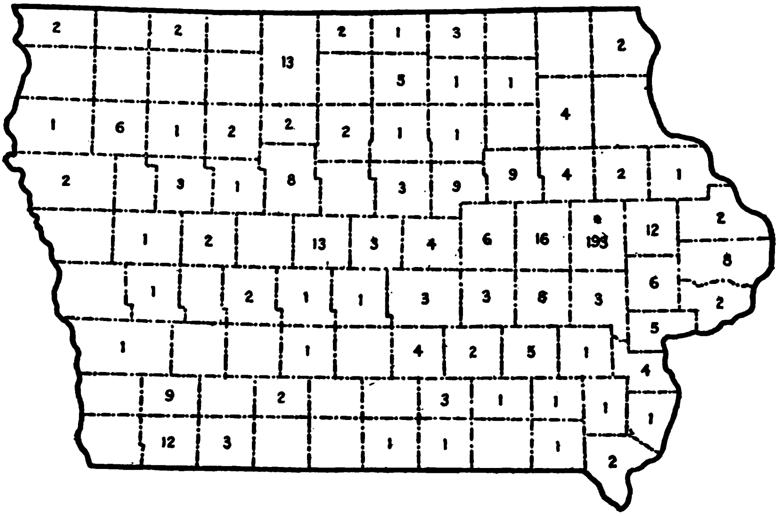


Central College, Pella, Iowa. Distribution of students by counties.



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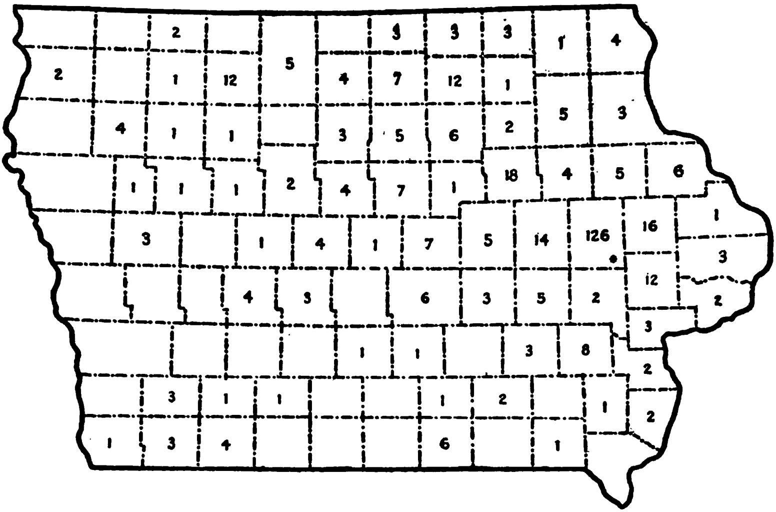

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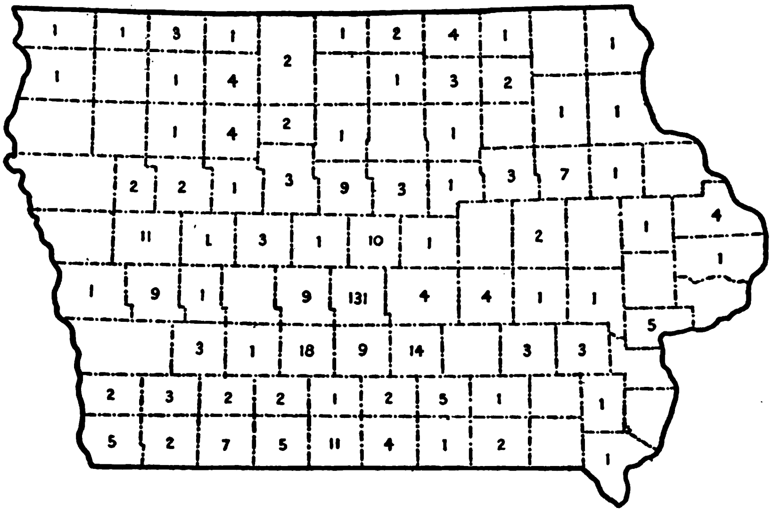

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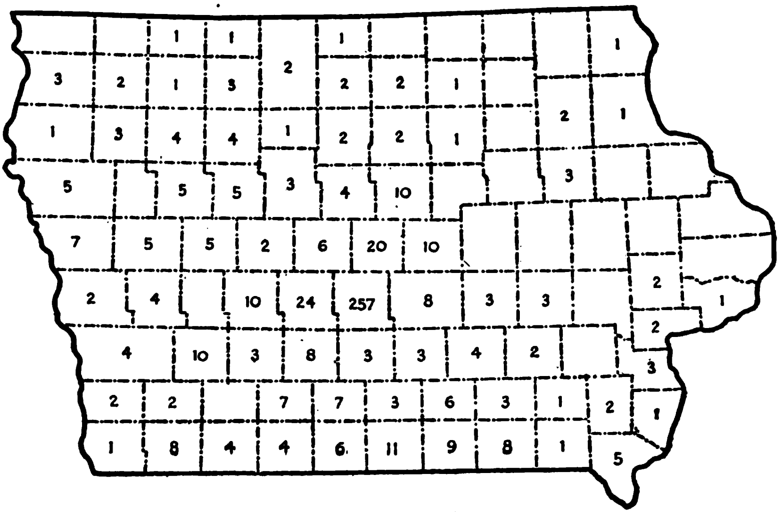

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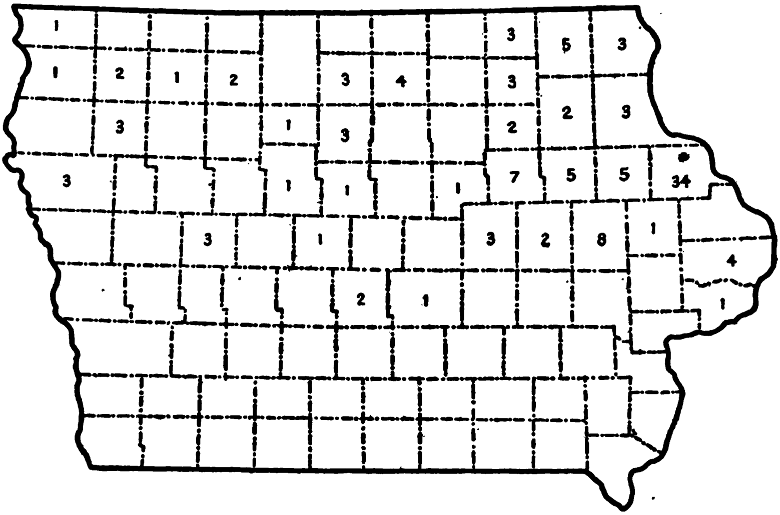

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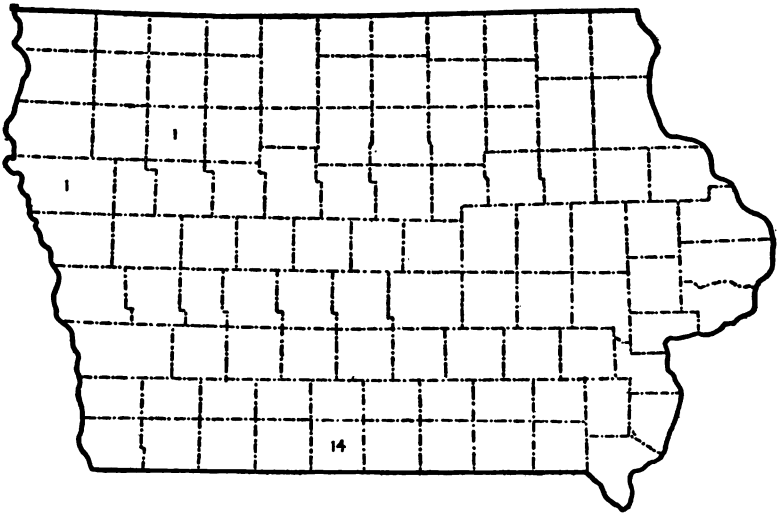
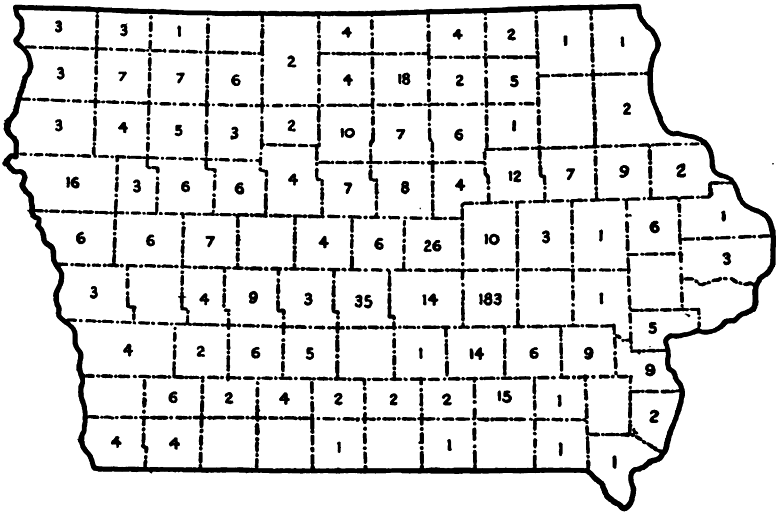


Graceland College, Lamoni, Iowa. Distribution of college students by counties. From outside the State, 25.



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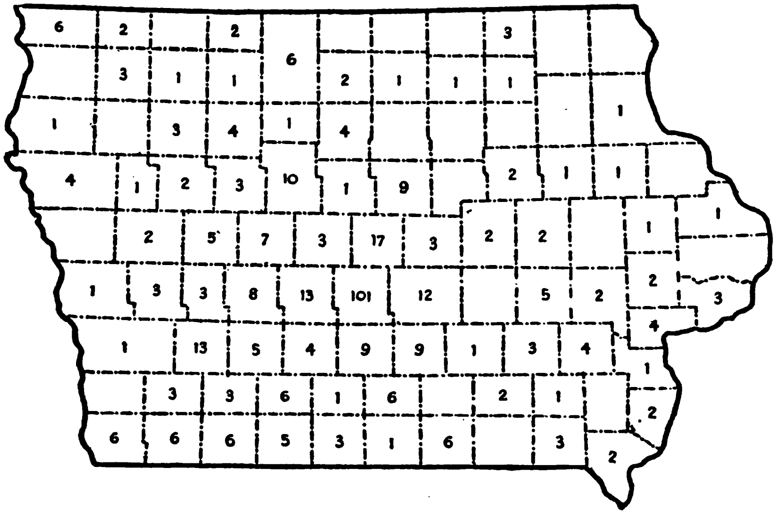

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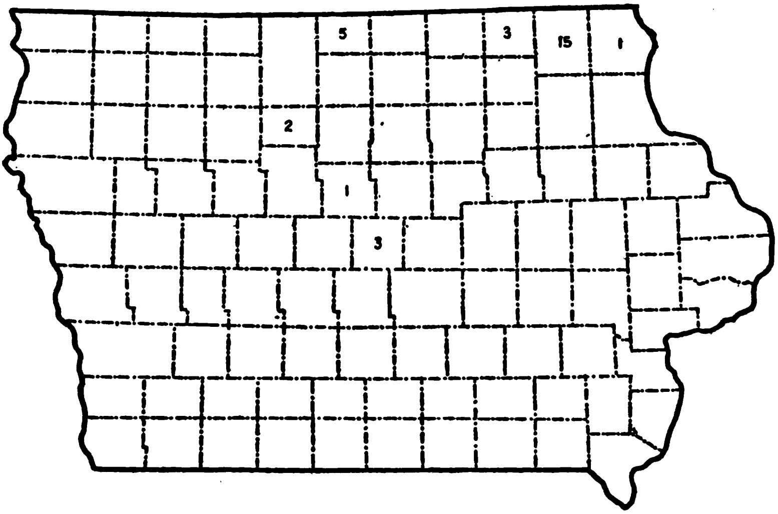

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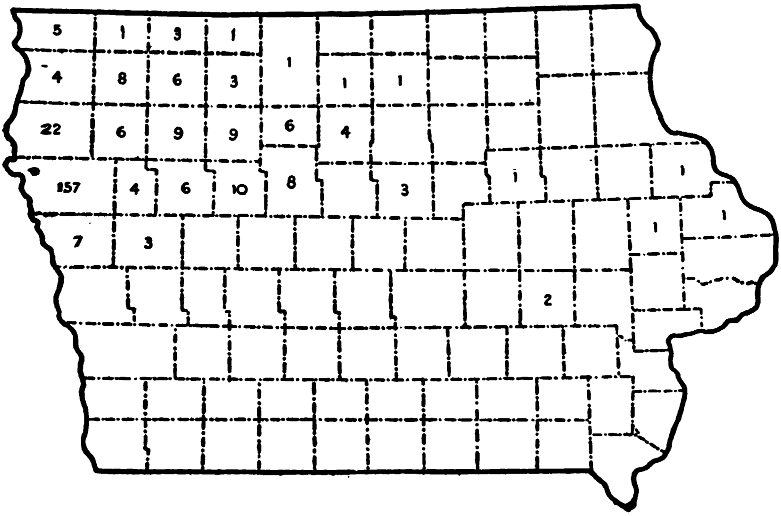

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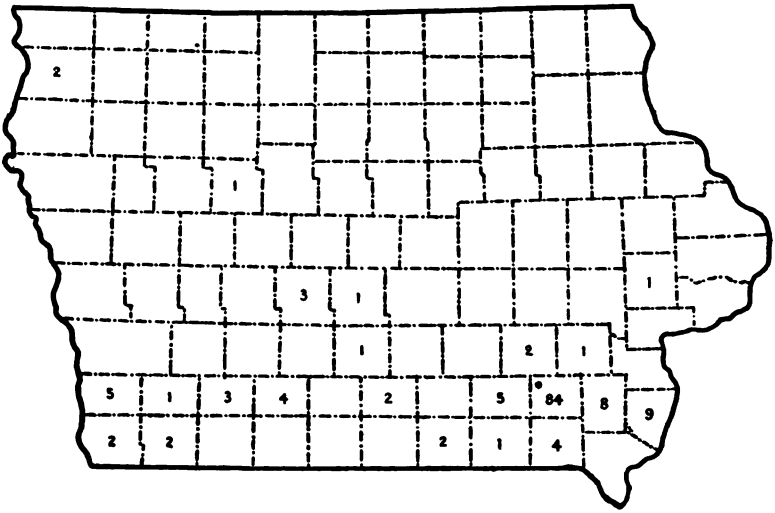

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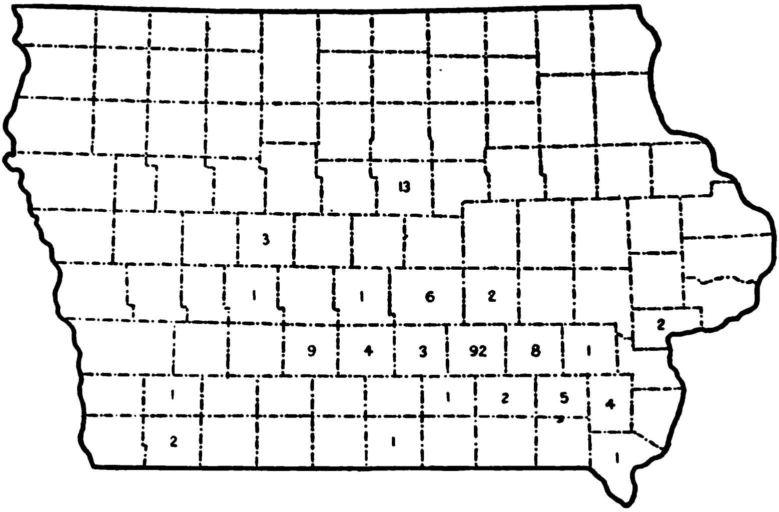

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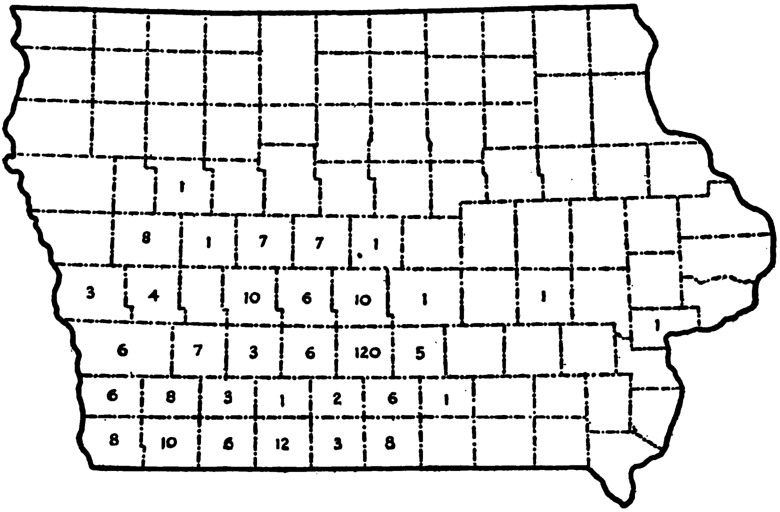

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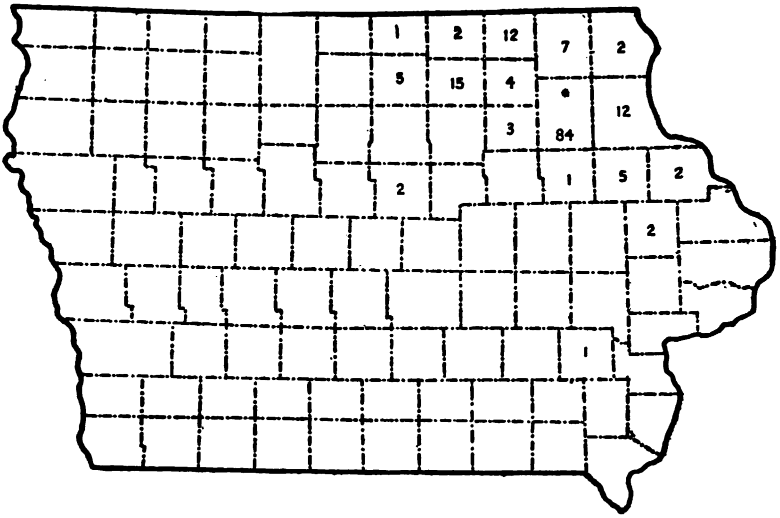

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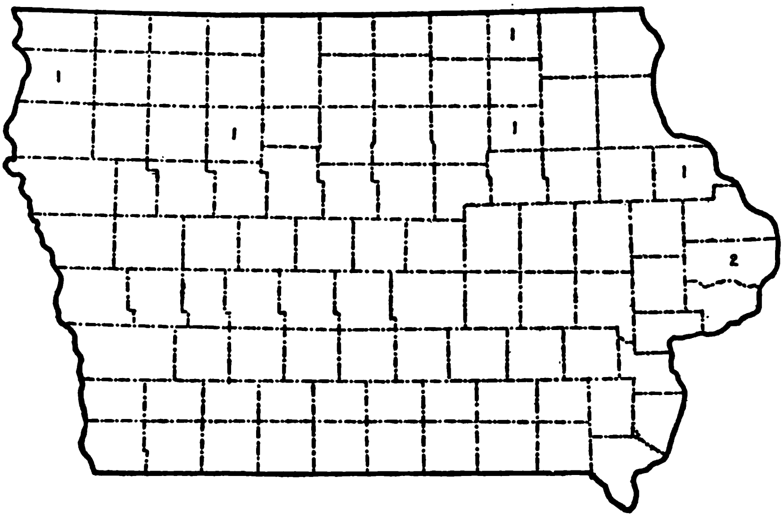

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1916, No. 20

ACCREDITED SECONDARY SCHOOLS IN THE UNITED STATES

Education Department
University of California.

BY

SAMUEL PAUL CAPEN
SPECIALIST IN HIGHER EDUCATION
BUREAU OF EDUCATION

WASHINGTON
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1916

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington.

SIR: Many students apply for admission to higher institutions in other States and sections than those in which they have received their high-school preparation. Many also seek certificates from examining and licensing boards, which have no direct means of knowing the standards of the schools from which the applicants come. The demand for this information led the Bureau of Education, first in the spring of 1913 and again in the autumn of 1914, to undertake the collection and preparation of lists of high schools and academies accredited by State universities, approved by State departments of education, or recognized by examining and certifying boards and by certain other agencies. The demand proved to be even greater than had been anticipated. The first edition of the bulletin was soon exhausted. There have been many requests from college and university officers for copies of the second edition. Moreover, changes are made in these lists of accredited schools from year to year. For these reasons, I have requested Dr. S. P. Capen, specialist in higher education in the bureau, once more to revise the pamphlet. The revision is contained in the accompanying manuscript which I recommend for publication as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

ACCREDITED SECONDARY SCHOOLS IN THE UNITED STATES.

The lists of accredited secondary schools which are presented now for the third time in this bulletin are designed to meet the needs of officers charged with the admission of new students to secondary schools, colleges, universities, professional schools (especially schools of law and medicine), normal schools, etc.; of State examining and certifying boards, which are concerned with the status of secondary schools located at a distance; and of parents who may want to know about the high schools of any particular State or section.

The first issue of the bulletin was published in 1913. The introduction to the second edition, published early in 1915, called attention to the fact that the great annual increase in the number of secondary schools (in 1910–11 there were 12,213; in 1911–12 the number had grown to 13,268; in 1913–14 it had reached 13,714), together with the sudden changes in standing, generally for the better, of many secondary schools in all parts of the country, necessitate frequent revisions of the lists. No new lists have been added in this edition and the arrangement of the bulletin is substantially unchanged. The essential parts of the introductions to the previous issues are reprinted here.

ACCREDITED SECONDARY SCHOOL DEFINED.

An "accredited secondary school," as the term is used in this bulletin, is a school which is equipped to prepare students for colleges requiring at least 14 units for unconditioned admission and which has been investigated or approved for this purpose by one of the following agencies: A State officer of education, a university or college inspector or committee on admissions, an officer or committee of an accrediting association. Except in the case of certain of the Southern States, whose high-school courses are based upon seven years of elementary training, it is understood that these 14 units represent secondary work above the standard eight-grade elementary-school course. It is assumed that the curriculum of an accredited school represents four years of 36 or more weeks each; that at least three teachers give their whole time to high-school work;[1] and that the school keeps up an adequate library and laboratory equipment.

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[1] Exceptions are certain schools in the lists of Arkansas, Georgia, Kentucky, New Hampshire, and Vermont which have less than three teachers but otherwise conform to the definition and are approved by the State officials.

UNIT DEFINED.

The following authoritative definition of the word "unit" has been made by the National Conference Committee on Standards of Colleges and Secondary Schools, which is composed of representatives of the National Association of State Universities, the New England College Entrance Certificate Board, the College Entrance Examination Board, the Association of Colleges and Preparatory Schools of the Middle States and Maryland, the North Central Association of Colleges and Secondary Schools, the Association of Colleges and Secondary Schools of the Southern States, the New England Association of Colleges and Secondary Schools, the Carnegie Foundation for the Advancement of Teaching, and the United States Commissioner of Education:

A unit represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work.

This statement is designed to afford a standard of measurement for the work done in secondary schools. It takes—

(1) The four-year high-school course as a basis and assumes that—
(2) The length of the school year is from 36 to 40 weeks; that—
(3) A period is from 40 to 60 minutes in length; and that—
(4) The study is pursued four or five periods a week;

but under ordinary circumstances a satisfactory year's work in any subject can not be accomplished in less than 120 sixty-minute hours, or their equivalent. Schools organized on any other than a four-year basis can nevertheless estimate their work in terms of this unit.

A four-year secondary-school curriculum should be regarded as representing not more than 16 units of work.

VARIATIONS IN REQUIREMENTS OF ACCREDITING AGENCIES.

The number of subjects recognized by the various accrediting bodies as forming an acceptable part of the college preparatory course varies greatly; for example, the subjects recognized by the College Entrance Examination Board as permissible in a standard high-school course are:[1]

	Units.		Units.
English up to	3	Spanish	2
Mathematics up to	4½	History	4
Latin	4	Science	6
Greek	3	Drawing	2
French	4	Music	I
German	4		

On the other hand, there are State universities and privately endowed institutions, like Leland Stanford University, which permit great enlargement of the range of electives. The University of Minnesota, for example, accepts the following:

---

[1] It should be noted, however, that the maximum amount of credit which a high-school student can secure in any single subject in a year is ordinarily one unit. Four units of credit in any given subject would therefore constitute the normal maximum for a high-school course.

	Units.
English	3–4
Mathematics	2–3½
Latin	2–4
Greek	2
French	1–4
German	1–4
Spanish	1–4
Scandinavian	1–4
History and social science	½–7
Natural science	½–6
Agriculture	1–4
Normal-training subjects	1–3

	Units.
Vocational subjects (made up of the following)	½–4
Business arithmetic	½
Business law	½
Bookkeeping	1–2
Stenography and typewriting	1–2
Freehand drawing	2
Mechanical drawing	2
Shopwork	2
Modeling and wood carving	1
Domestic art and science up to	4

It will therefore be apparent that the only close correspondence among the requirements of the various institutions mentioned in this pamphlet is the quantitative one. All specify at least 14 units, except the University of South Carolina, which admits with 12. None requires more than 16 units for admission.

The requirements of each accrediting agency are briefly stated at the head of the list of schools which each accredits. At the head of each list of schools accredited by a State university or private institution the requirements for admission to the A. B. course are summarized. The schools on the accredited list generally have the privilege of certificating students to other courses as well. To outline the admission requirements for all these courses would consume much space and might lead to confusion. The requirements for admission to the A. B. course may in each case be considered fairly typical of the institution's policy with respect to entrance requirements.

METHODS OF ACCREDITING.

Two methods are in common use for carrying on the system of accrediting in those States where the State authority embraces agencies for higher education. Under the first the inspection of the work of the high schools is done through an officer or committee of the State university, and the list of acceptable or accredited high schools is published in the catalogue of the university and thus made available for other institutions within the same State or for institutions in neighboring States. Under the second, the inspection and rating are done by the State superintendent of public instruction, the State board of education, or the State education office, acting through specially appointed officers. Examples of the former method are furnished by the Universities of Michigan, California, and Texas; of the latter method, by the States of New York, Ohio, and Minnesota.

The requirement of the completion of a standard four-year high-school course representing at least 14 units for admission to college, or as a part of the prescription for admission to professional schools or to the practice of professions, has produced a group of organizations among whose activities are the coordination of standards of secondary education in neighboring States and the compilation of lists of accredited secondary schools. Such sectional organizations are now at work in the North Central States, New England, and the Southern States. These organizations are purely voluntary and have no legal control over the institutions which they rate. The influence which they wield, however, because of the fact that they focus representative educational opinion in their respective sections, is considerable. Occasionally also private institutions, like the University of Chicago, have carried on their own investigation and accrediting.

CONTENTS OF THE BULLETIN.

PART I: STATE LISTS.

The bulletin is divided into three parts. The first part, as is appropriate, contains lists of schools accredited by State universities and State officers of education. Sometimes both the State university and the State department of education publish lists of accredited schools. In such cases the list of the State university is printed first, and all schools accredited by the State education department not included in the university list are then added by way of supplement.[1] When the State department of education or the State university publishes lists of accredited or approved high schools of different grades, only schools of the first grade are included in the bulletin, except in the cases of Georgia, Kansas, Kentucky, Louisiana, Maryland, and Nebraska.[2]

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[1] In four States, Minnesota, Missouri, Ohio, and West Virginia, the State education department accredits or approves only public schools, but private schools having the requisite standards and equipment are accredited by the State University.

[2] Schools accredited by the University of Georgia in Group II are included in the list published for that institution. These schools meet the requirements just outlined, except that they are admitted to the certificating privilege with only 2.5 teachers of academic subjects.

Class B schools accredited by the Kansas State Board of Education and the University of Kansas are four-year schools "which on account of financial and other considerations do not provide courses of study covering all departments of secondary work or in which there is not the same degree of permanency and efficiency in general administration."

Schools accredited by the University of Kentucky in Class B are required to have but two teachers. The session is six weeks longer, however, than that of the Class A schools.

The University of Louisiana accredits a small supplementary group of schools in addition to those approved by the State Board of Education.

The second-group schools of Maryland have been certified to by the superintendent of public instruction as fulfilling the definition of an accredited school printed above.

There are three groups of schools accredited by the University of Nebraska, groups A, B, and C. Group B includes schools which do not meet the standards of Group A schools as to the preparation of teachers or in library and laboratory facilities. Group C includes schools whose graduates may receive 28 points (14 units) credit, which gives them conditional admission to the university.

PART II: LISTS OF ACCREDITING ASSOCIATIONS.

Part II contains the lists of the three principal associations which undertake to accredit schools. The methods or standards of these associations are not identical. The list accredited by each is preceded by a statement of the basis upon which it is compiled.

PART III: LISTS OF CERTAIN PRIVATE INSTITUTIONS.

With regard to Part III, a special explanation is in order. After the publication of the first issue of this bulletin it was found that many excellent private schools, especially in the Eastern States, which were thoroughly equipped to prepare for college, and indeed had annually for many years been sending an entirely satisfactory delegation to the best colleges in the country, were omitted from the lists of accredited schools of the States in which they were located. This was due either to the fact that the States had no State universities admitting by certificate or to the failure of the State education departments to include private schools in their lists of approved secondary institutions. The absence of the names of many of these schools from a document as comprehensive in its scope as this publication gave rise to false impressions concerning their standing. It seemed desirable to extend the scope of the bulletin so as to secure their inclusion. Accordingly, when the second edition was in preparation, the Bureau of Education asked a number of colleges and universities admitting on certificate and drawing students from the States in which private schools had previously not received official recognition to submit their own lists of accredited schools. A similar procedure was followed during the preparation of the present edition. Three considerations have determined the choice of the higher institutions of whom this request has been made: First, the policy of admission on certificate; second, the area from which each institution was known to draw its students; and, third, the recognized high standing of each. The lists submitted by the Catholic University of America, University of Chicago, George Washington University, St. John's College, Mount Holyoke College, Wellesley College, and Tulane University are printed in full in Part III. At the end of Part III are printed also the names of those schools belonging to the Association of Colleges and Preparatory Schools of the Middle States and Maryland which, on account of their location, are not on any of the other lists included in the bulletin, but which have the privilege of certificating graduates to various colleges of high standing.

The schools are listed alphabetically, according to the towns in which they are located. The names of accredited private secondary schools and academies are printed in italics.

PART I.—STATE LISTS.

ALABAMA.

Schools fully affiliated with the University of Alabama for the year 1915-16.

	Units.
Admission requirements	14
Prescribed units:	
English	3
Mathematics	3
Latin	3 or 4
Electives	5 or 6

- Abbeville—Third District Agricultural School.
- Albertville—Seventh District Agricultural School.
- Alexander City—High School.
- Andalusia—High School.
- Anniston—
  - High School.
  - *Noble Institute.*
- Ashland—Clay County High School.
- Athens—
  - *College Academy.*
  - *Greene University School.*
  - Eighth District Agricultural School.
- Atmore—Escambia County High School.
- Attalla—Etowah County High School.
- Auburn—Lee County High School
- Bessemer—High School.
- Birmingham—
  - *College Training School.*
  - Central High School.
  - *Loulie Compton Seminary.*
  - *Howard Academy.*
  - *Margaret Allen School.*
  - *University High School.*
- Blountsville—Ninth District Agricultural School.
- Boaz—*Snead Seminary.*
- Brewton—Collegiate Institute.
- Bridgeport—*Academy.*
- Brundidge—Pike County High School.
- Butler—Choctaw County High School.
- Camden—Wilcox County High School.
- Camp Hill—High School.
- Castleberry—Conecuh County High School.
- Center—Cherokee County High School.
- Centerville—Bibb County High School.
- Clanton—Chilton County High School.
- Clio—Barbour County High School.
- Columbia—Houston County High School.
- Columbiana—Shelby County High School.
- Cuba—High School.
- Cullman—Cullman County High School.
- Dadeville—Tallapoosa County High School.
- Daphne—Normal School.
- Decatur—High School.
- Demopolis—High School.
- Dothan—High School.
- Double Springs—Winston County High School.
- Eclectic—Elmore County High School.
- Elkmont—Limestone County High School.
- Ensley—High School.
- Enterprise—Coffee County High School.
- Eufaula—High School.
- Eutaw—High School.
- Evergreen—Second District Agricultural School.
- Fayette—County High School.
- Florala—Covington County High School.
- Fort Deposit—Lowndes County High School.
- Fort Payne—Dekalb County High School.
- Gadsden—High School.
- Gaylesville—*Academy.*
- Greensboro—*Southern University Fitting School.*
- Greenville—High School.
- Grove Hill—Clarke County High School.
- Guin—Marion County High School.
- Guntersville—Marshall County High School.
- Gurley—Madison County High School.
- Haleyville—High School.
- Hamilton—Sixth District Agricultural School.
- Hartford—Geneva County High School.
- Hartsells—Morgan County High School.
- Headland—Henry County High School.
- Heflin—Cleburne County High School.
- Huntsville—
  - High School.
  - *Goodrich School.*
- Jackson—First District Agricultural School.
- Jasper—Walker County High School.
- La Fayette—High School.
- Leighton—Colbert County High School.
- Lincoln—Talladega County High School.
- Lineville—N. E. Alabama Agricultural Institute.
- Marion—
  - *Judson Academy.*
  - Perry County High School.
- Milltown—Chambers County High School.
- Mobile—
  - High School.
  - *Knott High School.*
  - *University Military School.*
- Monroeville—Monroe County High School.
- Montgomery—
  - *Barnes School.*
  - *Edgar School.*
  - Sidney Lanier High School.
- Moulton—Lawrence County High School.

Moundville—Normal School.
New Decatur—High School.
Newton—*Baptist Collegiate Institute.*
Notasulga—Macon County High School.
Odenville—St. Clair County High School.
Oneonta—Blount County High School.
Opelika—High School.
Opp—High School.
Oxford—Calhoun County High School.
Ozark—Dale County High School.
Piedmont—High School.
Plantersville—Dallas County High School.
Prattville—Autauga County High School.
Reform—Pickens County High School.
Roanoke—Handley High School.
Rockford—Coosa County High School.
Rogersville—Lauderdale County High School.
Russellville—Franklin County High School.
Scottsboro—Jackson County High School.
Selma—High School.
Sheffield—High School.
Sylacauga—Fourth District Agricultural School.
Talladega—High School.
Thomaston—Marengo County High School.
Thomasville—High School.
Thorsby—*Institute.*
Tuscaloosa—High School.
Tuscumbia—High School.
Tuskegee—High School.
Union Springs—High School.
Vernon—Lamar County High School.
Wedowee—Randolph County High School.
Wetumpka—Fifth District Agricultural School.
York—Sumter County High School.

ARIZONA.

Accredited by the University of Arizona, November, 1915.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2½
History and civics	1
Science	1
Foreign languages	2
Electives	5½

Bisbee—High School.
Clifton—High School.
Douglas—High School.
Flagstaff—Northern Arizona Normal School (academic department).
Glendale—High School.
Globe—High School.
Jerome—High School.
Mesa—High School.
Miami—High School.
Nogales—High School.
Phoenix—High School.
Prescott—High School.
Saint Johns—*Academy.*
Snowflake—*Academy.*
Tempe—
  High School.
  Tempe Normal School of Arizona (academic department).
Thatcher—*Gila Academy.*
Tucson—High School.
Wilcox—High School.
Winslow—High School.
Yuma—High School.

In addition to the above (public) high schools, the following are also approved by the State board of education.

After July 1, 1916, high schools in order to be approved by the State board must require for graduation 15 units, as follows:

	Units.
English	3
Mathematics	2
History	2
Science	1
Electives	7

They must also provide opportunities to their graduates to fulfill the requirements for entrance to the University of Arizona.

Benson—High School.
Bisbee—High School.
Clifton—High School.
Douglas—High School.
Duncan—High School.
Glendale—High School.
Globe—High School.
Jerome—High School.
Kingman—High School.
Mesa—High School.
Miami—High School.
Morenci—High School.
Nogales—High School.
Phoenix—High School.
Prescott—High School.
Safford—High School.
Tempe—High School.
Tucson—High School.
Tombstone—High School.
Willcox—High School.
Williams—High School.
Winslow—High School.
Yuma—High School.

ARKANSAS.

Class A schools approved by the Arkansas State Department of Education and accredited by the University of Arkansas, November, 1915.

	Units.
University admission requirements	14
Prescribed units:	
English	3
Mathematics	2
History	1
Foreign languages	3
Electives	5

Argenta—High School.
Arkadelphia—High School.
Ashdown—High School.
Atkins—High School.
Augusta—High School.
Bentonville—High School.
Blytheville—High School.
Boonville—High School.
Brinkley—High School.
Cabot—High School.
Camden—Normal Training High School
Carlisle—High School.
Clarendon—High School.
Conway—
    Arkansas State Normal School.
    High School.
Corning—High School.
Crossett—High School.
Dardanelle—High School.
Dermott—High School.
Dumas—High School.
El Dorado—High School.
El Paso—High School.
England—High School.
Eureka Springs—
    Cresent College Academy.
    High School.
Fayetteville—
    High School.
    University Training High School.
Fordyce—High School.
Foreman—High School.
Forrest City—High School.
Fort Smith—Normal Training High School.
Gentry—High School.
Gravette—High School.
Green Forest—High School.
Greenwood—High School.
Hamburg—High School.
Harrison—High School.
Hazen—High School.
Helena—High School.
Hope—High School.
Hot Springs—
    High School.
    Normal Training High School.
Huntington—High School.
Jonesboro—High School.
Junction City—High School.
Leslie—High School.
Lake Village—High School.
Little Rock—
    High School.
    Little Rock College.
Lonoke—High School.
Malvern—High School.
Marianna—High School.
Mena—High School.
Monticello—
    High School.
    State Agricultural School.
Moro—High School.
Morrilton—High School.
Mountain Home—Normal Training High School.
Nashville—High School.
Newport—High School.
Paragould—High School.
Pea Ridge—*Masonic College.*
Piggott—High School.
Pine Bluff—Normal Training High School.
Pocahontas—High School.
Portland—High School.
Prescott—High School.
Rector—High School.
Rogers—High School.
Russellville—High School.
Searcy—High School.
Siloam Springs—High School.
Springdale—High School.
Stamps—High School.
Stephens—High School.
Stuttgart—
    High School.
    Training School.
Texarkana—Normal Training High School.
Van Buren—High School.
Waldron—High School.
Walnut Ridge—High School.
Warren—High School.
Wynne—High School.

CALIFORNIA.

Accredited by the University of California for the year 1914-15.

	Units.
Admission requirements	15
Prescribed units:	
English	2
Mathematics	2
History and civics	1
Science	1
Foreign languages	2
Additional foreign language, science, or mathematics (or combinations of these subjects)	2
Electives	5

Alameda—High School.
Alhambra—City High School.
Alpaugh—High School.
Alturas—Modoc County High School.
Anaheim—Union High School.
Antioch—Riverview Union High School.
Arcata—Union High School.
Arroyo Grande—Union High School.
Auburn—Placer County High School.
Azusa—Citrus Union High School.
Bakersfield—Kern County High School.
Banning—Union High School.
Beaumont—High School.
Belmont—*Belmont School.*
Benicia—High School.
Berkeley—
  High School.
  A-to-Zed School.
  Boone's University School.
  Miss Head's School.
  Preparatory School.
  The Randolph School.
  Wellesley School.
Bishop—Union High School.
Bostonia—El Cajon Valley Union High School.
Brawley—Union High School.
Brentwood—Liberty Union High School.
Burlingame—*St. Matthew's School.*
Burbank—Union High School.
Calexico—Union High School.
Calistoga—Joint Union High School.
Campbell—Union High School.
Cedarville—Surprise Valley Union High School.
Centerville—Union High School.
Ceres—High School.
Chico—High School.
Chino—High School.
Claremont—High School.
Cloverdale—Union High School.
Clovis—Union High School.
Coalinga—Union High School.
College City—Pierce Joint Union High School.
Colton—High School.
Colusa—High School.
Compton—Union High School.
Concord—Mount Diablo Union High School.
Corcoran—Union High School.
Corning—Union High School.
Corona—High School.
Covelo—Round Valley Union High School.
Covina—Union High School.
Crescent City—Del Norte County High School.
Crockett—John Swett Union High School.
Danville—San Ramon Valley Union High School.
Delano—Joint Union High School.
Dinuba—Union High School.
Dixon—Union High School.
Dos Palos—Joint Union High School.
Downey—Los Nietos Union High School.
El Centro—Central Union High School.
Elk Grove—Union High School.
El Monte—Union High School.
Elsinore—Union High School.
Escondido—High School.
Esparto—Union High School.
Etna Mills—Etna Union High School.
Eureka—City High School.
Exeter—Union High School.
Fairfield—Armijo Union High School.
Fallbrook—Union High School.
Ferndale—Union High School.
Fillmore—Union High School.
Fort Bragg—Union High School.
Fortuna—High School.
Fowler—Union High School.
Fresno—High School.
Fullerton—Union High School.
Galt—Joint Union High School.
Gilroy—High School.
Glendale—Union High School.
Gonzales—Union High School.
Grass Valley—High School.
Gridley—Union High School.
Hanford—Union High School.
Hayward—Union High School.
Healdsburg—High School.
Hemet—Union High School.
Hollister—San Benito County High School.
Hollywood—*Immaculate Heart College.*
Holtville—Union High School.
Hughson—High School.
Huntington Beach—Union High School.
Huntington Park—Union High School.
Imperial—Imperial Valley Union High School.
Inglewood—Union High School.
Ione—Union High School.
Irwin—Hilmar Union High School.
Jackson—Joint Union High School.
Julian—Cuyamaca High School.
Kerman—Union High School.
King City—Monterey County High School.
Kingsburg—Joint Union High School.
La Jolla—*Bishop's School.*
Lakeport—Clear Lake Union High School.
Laton—Joint Union High School.
La Grand—Joint Union High School.
Lemoore—Union High School.
Lincoln—Union High School.
Lindsay—High School.
Livermore—Union High School.

- Lodi—Union High School.
- Lompoc—Union High School.
- Long Beach—Polytechnic High School.
- Lordsburg—
  - Bonita Union High School.
  - *Palmera College, Academic Department.*
- Los Angeles—
  - *Cathedral High School for Girls.*
  - *Cumnock Academy.*
  - Gardena Agricultural High School.
  - *Girls' Collegiate School.*
  - *Harvard School.*
  - High School.
  - Hollywood High School.
  - Lincoln High School.
  - Manual Arts High School.
  - *Marlborough School.*
  - Polytechnic High School.
  - *Saint Mary's Academy.*
  - San Pedro High School.
  - *Westlake School for Girls.*
- Los Banos—West Side Union High School.
- Los Gatos—High School.
- Loyalton—Sierra Valley Joint Union High School.
- Madera—Union High School.
- Martinez—Alhambra Union High School.
- Marysville—High School.
- Maxwell—Union High School.
- Mendocino—Mendocino County High School.
- Merced—County High School.
- Mill Valley—Tamalpais Union High School.
- Modesto—High School.
- Monrovia—City High School.
- Montebello—High School.
- Monterey—County High School.
- Morgan Hill—Live Oak Union High School.
- Mountain View—High School.
- Napa—High School.
- National City—High School.
- Needles—District High School.
- Nevada City—High School.
- Newman—Orestimba Union High School.
- Nordhoff—Union High School.
- Norwalk—Excelsior Union High School.
- Oakdale—Union High School.
- Oakland—
  - High School.
  - *College of the Holy Names High School.*
  - *Horton School.*
  - John C. Freemont High School.
  - *Merriman School.*
  - Oceanside—Carlsbad Union High School.
  - Technical High School.
- Oleander—Washington Union High School.
- Ontario—Chaffey Union High School.
- Orange—Union High School.
- Orland—Joint Union High School.
- Orosi—Union High School.
- Oroville—Union High School.
- Oxnard—Union High School.
- Pacific Beach—*San Diego Army and Navy Academy.*
- Pacific Grove—High School.
- Palo Alto—
  - High School.
  - *Castilleja School.*
  - *Manzanita Hall.*
  - *Miss Harker's School.*
- Pasadena—
  - High School.
  - *Orton School.*
- Paso Robles—High School.
- Patterson—Union High School.
- Perris—Union High School.
- Petaluma—High School.
- Piedmont—*Miss Ransom and Miss Bridges' School.*
- Placerville—El Dorado County High School.
- Point Arena—Union High School.
- Pomona—High School.
- Porterville—Union High School.
- Princeton—Joint Union High School.
- Quincy—Plumas County High School.
- Ramona—Union High School.
- Red Bluff—Union High School.
- Redding—Shasta County High School.
- Redlands—High School.
- Redondo—Union High School.
- Redwood City—Sequoia Union High School.
- Reedley—Joint Union High School.
- Richmond—Union High School.
- Rio Vista—Joint Union High School
- Ripon—Union High School.
- Riverside—
  - Girls' High School.
  - Polytechnic High School.
- Roseville—Union High School.
- Sacramento—High School.
- St. Helena—Union High School.
- Salinas—High School.
- San Andreas—Calaveras County High School.
- San Bernardino—High School.
- San Diego—
  - *Bishop's School.*
  - High School.
- San Fernando—Union High School.
- San Francisco—
  - *Miss Burkes' School.*
  - *California School of Mechanical Arts.*
  - *Cogswell Polytechnical College.*
  - *Drew's Coaching School.*
  - Girls' High School.
  - High School of Commerce.
  - *Hamlin School.*
  - *High School of Notre Dame.*
  - Lowell High School.
  - Mission High School.
  - Polytechnic High School.
  - *Potter School.*
  - *St. Rose Academy.*
  - *Star of the Sea School.*
  - *Trinity School.*
  - *University School.*
- Sanger—Union High School.
- San Jacinto—High School.
- San Jose—
  - *College of Notre Dame.*
  - *College Park Academy.*
  - High School.
  - *Notre Dame High School.*
  - *Washburn School.*
- San Luis Obispo—High School.
- San Mateo—Union High School.
- San Rafael—
  - *Dominican College.*
  - High School.

- San Rafael—Continued.
  - *Hitchcock Military Academy.*
  - *Mount Tamalpais Military Academy.*
- Santa Ana—High School.
- Santa Barbara—
  - *Girls' School.*
  - High School.
- Santa Clara—High School.
- Santa Cruz—High School.
- Santa Maria—Union High School.
- Santa Monica—High School.
- Santa Paula—Union High School.
- Santa Rosa—
  - High School.
  - *Ursuline College.*
- Santa Ynez—Santa Ynez Valley Union High School.
- Sebastopol—Analy Union High School.
- Selma—Union High School.
- Shorb—*Ramona Convent of the Holy Names.*
- Sonoma—Valley Union High School.
- Sonora—Tuolumne County High School.
- South Pasadena—High School.
- Stockton—
  - High School.
  - *St. Agnes' Academy.*
- Susanville—Lassen County High School.
- Sutter—Union High School.
- Sutter Creek—Amador County High School.
- Tracy—West Side Union High School.
- Truckee—Meadow Lake Union High School.
- Tulare—High School.
- Tuolumne—Summerville Union High School.
- Turlock—Union High School.
- Ukiah—Mendocino County High School.
- Vacaville—Union High School.
- Vallejo—High School.
- Van Nuys—High School.
- Venice—Union Polytechnic High School.
- Ventura—Union High School.
- Visalia—High School.
- Watsonville—High School.
- Weaverville—Trinity County High School.
- Whittier—Union High School.
- Williams—Union High School.
- Willits—Union High School.
- Willows—Glenn County High School.
- Winters—Joint Union High School.
- Woodland—High School.
- Yreka—Siskiyou County High School.

COLORADO.

Accredited by the University of Colorado for the year 1915-16.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2
Foreign language	4
History	2
Science	2
Electives	2

- Alamosa—High School.
- Arvada—High School.
- Aspen—High School.
- Berthoud—High School.
- Boulder—State Preparatory School.
- Breckenridge—High School.
- Brighton—High School.
- Brush—Union High School.
- Canon City—
  - High School.
  - South Canon City High School.
- Castle Rock—Douglas County High School.
- Central City—Union High School.
- Cheyenne Wells—Cheyenne County High School.
- Colorado City—High School.
- Colorado Springs—High School.
- Cripple Creek—High School.
- Debeque—High School.
- Delta—High School.
- Denver—
  - East Side High School.
  - Manual Training High School.
  - North Side High School.
  - South Side High School.
  - West Side High School.
  - *Miss Walcott's School.*
- Durango—High School.
- Eaton—High School.
- Florence—High School.
- Fort Collins—High School.
- Fort Morgan—High School.
- Fowler—High School.
- Fruita—Union High School.
- Georgetown—High School.
- Glenwood Springs—Garfield County High School.
- Golden—High School.
- Grand Junction—High School.
- Greeley—High School.
- Gunnison—Gunnison County High School.
- Holly—Union High School.
- Holyoke—Phillips County High School.
- Idaho Springs—High School.
- Julesburg—Sedgwick County High School.
- Lafayette—High School.
- La Junta—Otero County High School.
- Lamar—Union High School.
- Las Animas—Bent County High School.
- Leadville—High School.
- Littleton—High School.
- Longmont—High School.
- Louisville—High School.
- Loveland—High School.
- Manitou—High School.
- Meeker—Rio Blanco High School.
- Monte Vista—High School.
- Montrose—Montrose County High School.
- Ouray—Ouray County High School.
- Palisades—
  - Mount Lincoln High School.
  - Palisade High School.

Paonia—High School.
Pueblo—
  Centennial High School (Dist. No. 1).
  Central High School (Dist. No. 20).
Rifle—Union High School.
Rocky Ford—High School.
Saguache—Saguache County High School.
Salida—High School.
Silverton—High School.
Sterling—Logan County High School.
Telluride—High School.
Trinidad—High School.
Victor—High School.
Walsenburg—Huerfano County High School.
Wheat Ridge—High School.
Windsor—High School.
Wray—Yuma County High School.

CONNECTICUT.

Schools approved by the Connecticut State Board of Education, January 1, 1916.

Requirements for approval: Satisfactory building equipment and health provisions; well-adjusted course of study; a teaching staff well qualified in respect of an education, and ability to teach; instruction on the high-school plane; adequate wages and upkeep; adaptation to community interests.

Ansonia—High School.
Branford—High School.
Bridgeport—High School.
Bristol—High School.
Central Village—Plainfield High School.
Chester—High School.
Clinton—*Morgan School.*
Colchester—Bacon Academy.
Collinsville—High School.
Danbury—High School.
Danielson—Killingly High School.
Derby—High School.
Durham—High School.
Deep River—Saybrook High School.
East Hartford—High School.
Essex—High School.
Glastonbury—High School.
Greenwich—High School.
Guilford—High School.
Hartford—High School.
Meriden—High School.
Middletown—High School.
Naugatuck—High School.
New Britain—High School.
New Haven—High School.
New London—
  Bulkeley School.
  Manual Training and Industrial School.
  Williams Memorial Institute.
New Milford—High School.
Norwalk—
  Junior High School.
  Senior High School.
Norwich—*Free Academy.*
Portland—High School.
Putnam—High School.
North Stonington—*Wheeler School.*
Ridgefield—High School.
Seymour—High School.
Shelton—High School.
Simsbury—High School.
Southington—Lewis High School.
South Manchester—High School.
Stafford Springs—Stafford High School.
Stamford—High School.
Stonington—High School.
Stratford—High School.
Suffield—High School.
Terryville—High School.
Thomaston—High School.
Thompsonville—Enfield Public High School.
Torrington—High School.
Unionville—High School.
Vernon—Rockville High School.
Waterbury—High School.
Watertown—High School.
West Hartford—High School.
West Haven—High School.
Westport—High School.
Wethersfield—High School.
Willimantic—Windam High School.
Windsor—High School.
Windsor Locks—High School.
Winsted—*Gilbert School.*
Woodbury—High School.
Woodstock—High School.

DELAWARE.

First-grade high schools reported by the Commissioner of Education of Delaware, for the year 1915-16.

Camden-Wyoming—Caesar Rodney Consolidated School No. 1.
Georgetown—High School.
Laurel—High School.
Lewes—High School.
Milford—High School.
Newark—High School.
New Castle—High School.
Seaford—High School.
Smyrna—High School.
Wilmington—High School.

Schools Accredited by Delaware College, December, 1915.

	Units.
Admission requirements	14½
Prescribed units:	
English	3
Mathematics	2½
History	1
Modern language	1
Latin	4
Electives	3

Dover—*Wilmington Conference Academy.*
Georgetown—High School.
Laurel—High School.
Lewes—High School.
Milford—High School.
New Castle—High School.
Seaford—High School.
Smyrna—High School.
Wilmington—
  Friends' School.
  High School.

DISTRICT OF COLUMBIA.

Secondary schools which have definite and formal accredited relations with outside universities equivalent to those of accredited schools in the States.

Washington—
  Armstrong Manual Training High School (colored).
  Central High School.
  Eastern High School.
  Emerson Institute.
  Friends' Select School.
Washington (continued)—
  Madeira School for Girls.
  M Street High School (colored).
  McKinley Manual Training High School.
  National Cathedral School for Boys.
  National Cathedral School for Girls.
  Western High School.

FLORIDA.

Schools approved by the Florida State Board of Education and accredited by the University of Florida December, 1915.

	Units.
University admission requirements	[1] 16
Prescribed units:	
English	3
Mathematics	3
History	1
Science	1
Latin	2
Electives	6

Arcadia—High School.
Bartow—High School.
Bradentown—High School.
Brooksville—High School.
Clearwater—High School.
Dade City—High School.
Daytona—High School.
DeFuniak Springs—High School.
Dunnellon—High School.
Eustis—High School.
Fort Lauderdale—High School.
Fort Meade—High School.
Fort Myers—High School.
Fort Pierce—High School.
Gainesville—High School.
Jacksonville—High School.
Key West—High School.
Kissimmee—High School.
Lake Butler—High School.
Lake City—High School.
Largo—High School.
Lakeland—High School.
Leesburg—High School.
Live Oak—High School.
Madison—High School.
Marianna—High School.
Miami—High School.
Mulberry—High School.
New Smyrna—High School.
Ocala—High School.
Orlando—High School.
Palatka—High School.
Palmetto—High School.
Pensacola—High School.
Plant City—High School.
Punta Gorda—High School.
Quincy—Gadsden County High School.
St. Augustine—High School.
St. Cloud—High School.
St. Petersburg—High School.
Sanford—High School.
Sarasota—High School.
Seabreeze—High School.
Starke—High School.
Tallahassee—High School.
Tampa—High School.
Tarpon Springs—High School.
Wauchula—High School.
West Palm Beach—High School.
Zephyrhills—High School.

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[1] Equal to 14½ standard units.

GEORGIA.

GROUP I.

Schools "fully accredited" by the University of Georgia, 1915-16. Graduation on 15 to 16 accepted units.

	Units.
Admission requirements	14
Prescribed units:	
English	3
Mathematics	2½
History	2
Foreign languages	2
Electives	2½

Albany—High School.
Americus—High School.
Athens—High School.
Atlanta—
  Boys' High School.
  Girls' High School.
  Marist College.
  Peacock's School.
  Technological High School.
  Washington Seminary.
  Woodberry School.
Augusta—
  Richmond Academy.
  St. Joseph's Academy.
  Summerville Academy.
  Tubman High School.
Bainbridge—High School.
Barnesville—Gordon Institute.
Boston—High School.
Brunswick—Glynn Academy.
Cartersville—High School.
Cedartown—High School.
College Park—*Georgia Military Academy.*
Columbus—High School.
Commerce—High School.
Cordele—High School.
Dalton—High School.
Demorest—*Piedmont Academy.*
Dublin—High School.
Elberton—High School.
Fitzgerald—High School.
Fort Valley—High School.
Gainesville—*Riverside Military Academy.*
Greensboro—High School.
Griffin—High School.
Jackson—High School.
La Grange—
  College Academy.
  High School.
Locust Grove—*Institute.*
Macon—Lanier High School.
Madison—High School.
Marietta—High School.
McRae—*South Georgia College.*
Milledgeville—*Georgia Military College.*
Moultrie—High School.
Mount Berry—*The Berry School for Boys.*
Newnan—High School.
Quitman—High School.
Rome—
  Darlington Academy.
  High School.
Savannah—
  Benedictine College.
  Chatham Academy.
  Pape School.
Thomaston—R. E. Lee Institute.
Thomasville—High School.
Tifton—High School.
Toccoa—High School.
Valdosta—High School.
Washington—High School.
Waycross—High School.
West Point—High School.

GROUP II.

Graduation on 14 accepted units.

Ashburn—High School.
Auburn—*Christian Academy.*
Baxley—High School.
Blackshear—*Pierce Collegiate Institute.*
Blakely—High School.
Bowdon—High School.
Bowman—*Gibson-Mercer Institute.*
Buena Vista—High School.
Camilla—High School.
Canton—High School.
Carrollton—High School.
Cave Spring—*Hearn Academy.*
Cochran—High School.
Columbus—Secondary Industrial School.
Dawson—High School.
Decatur—High School.
Eastman—High School.
Forsyth—High School.
Gainesville—High School.
Graymont—High School.
Hartwell—High School.
Hepzibah—High School.
Jonesboro—High School.
Lawrenceville—High School.
McDonough—High School.
Monroe—High School.
Montezuma—High School.
Mount Vernon—*Brewer-Parker Institute.*
Norman Park—*Institute.*
Pavo—High School.
Sandersville—High School.
Sparks—*Collegiate Institute.*
Sparta—High School.
Tallapoosa—High School.
Tennille—High School.
Thomson—High School.
Vidalia—High School.
Warren—High School.
Wrens—High School.
Winder—High School.

IDAHO.

Accredited by the University of Idaho, April, 1916.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2
Foreign language (one)	2
Social science, including history	1
Natural science	1
Electives	6

Albion—State Normal School.
American Falls—High School.
Bellevue—High School.
Blackfoot—High School.
Boise—
  High School.
  St. Margaret's Academy.
  St. Teresa's Academy.
Bonners Ferry—High School.
Buhl—High School.
Burke—High School.
Burley—High School.
Caldwell—
  College of Idaho, Preparatory Department.
  High School.
Coeur d' Alene—
  Coeur d' Alene College.
Cottonwood—High School.
Council—High School.
Culdesac—High School.
Emmett—High School.
Filer—High School.
Fruitland—High School.
Genesee—High School.
Glenns Ferry—High School.
Gooding—High School.
Grangeville—High School.
Hailey—High School.
Idaho Falls—High School.
Jerome—High School.
Kamiah—High School.
Kuna—High School.
Lapwai—High School.
Lewiston—
  High School.
  State Normal School.
Malad—High School.
Meridian—High School.
Middleton—High School.
Midvale—High School.
Montpelier—High School.
Moscow—
  High School.
  Ursuline Academy.
Mountain Home—High School.
Mullan—High School.
Nampa—High School.
New Plymouth—High School.
Nez Perce—High School.
Orofino—High School.
Paris—*Fielding Academy.*
Parma—High School.
Payette—High School.
Plummer—High School.
Pocatello—
  Idaho Technical Institute.
  High School.
Post Falls—High School.
Potlatch—High School.
Preston—*Oneida Stake Academy.*
Rathdrum—High School.
Reubens—High School.
Rexburg—*Ricks Academy.*
Richfield—High School.
Rigby—High School.
Rupert—High School.
St. Anthony—High School.
Salem Sugar—High School.
Salmon—High School.
Sandpoint—High School.
Shoshone—High School.
Spirit Lake—High School.
Star—High School.
Troy—High School.
Twin Falls—High School.
Wallace—High School.
Wardner—High School.
Weiser—
  High School.
  Idaho Industrial Institute.
Wendell—High School.
Winchester—High School.

ILLINOIS.

Accredited by the University of Illinois, March, 1916.

"The following high schools, having all the prescribed units and enough others to make up the required total of 15 units, are in the list of fully accredited schools.

"Not all these schools, however, are accredited for the same amount of work, nor all for the same subjects. A student presenting a certificate from any one of these schools will be given entrance credit for all the subjects named therein for which the said school is specifically accredited, as shown in the certificate of its accredited relation issued by the university."

	Units.
Admission requirements	15
Prescribed units—	
English	3
Mathematics	2
Science	1
For courses in literature and arts in the college of liberal arts and sciences—	
Foreign language	2
Electives	7

- Abingdon—High School.
- Albion—
  - High School.
  - *Southern Collegiate Institute.*
- Aledo—
  - *Drury Academy.*
  - High School.
- Altamont—High School.
- Alton—
  - High School.
  - *Western Military Academy.*
- Amboy—High School.
- Anna—
  - High School.
  - *Union Academy.*
- Arcola—High School (Township).
- Arlington Heights—High School.
- Armington—High School (Township).
- Arthur—High School.
- Ashland—High School.
- Ashton—High School.
- Assumption—High School (Township).
- Astoria—High School.
- Atlanta—High School.
- Atwood—High School.
- Augusta—High School.
- Aurora—
  - East High School.
  - *Jennings Seminary.*
  - West High School.
- Avon—High School.
- Barrington—High School.
- Barry—High School.
- Batavia—High School.
- Beardstown—High School.
- Belleville—High School.
- Bellflower—High School (Township).
- Belvidere—High School.
- Bement—High School.
- Benton—High School (Township).
- Biggsville—High School (Township).
- Bismarck—High School (Township).
- Bloomington—
  - High School.
  - *St. Mary's High School.*
- Blue Island—High School (Township).
- Bowen—High School.
- Bradford—High School.
- Bridgeport—High School (Township).
- Buda—High School.
- Bushnell—High School.
- Byron—High School.
- Cairo—
  - High School.
  - Summer High School.
- Cambridge—High School.
- Camp Point—High School.
- Canton—High School.
- Carbondale—Southern Illinois Normal University High School.
- Carlinville—High School.
- Carlyle—High School.
- Carmi—High School (Township).
- Carrollton—High School.
- Carterville—High School.
- Carthage—
  - *Carthage College Academy.*
  - High School.
- Casey—High School.
- Centralia—High School (Township).
- Champaign—High School.
- Charleston—High School.
- Chatham—High School.
- Chatsworth—High School.
- Chenoa—High School.
- Chester—High School.
- Chicago—
  - Austin High School.
  - Bowen High School.
  - Calumet High School.
  - Carl Schurz High School.
  - *Chicago Latin School.*
  - R. T. Crane Technical High School.
  - Englewood High School.
  - Fenger High School.
  - *Francis W. Parker School.*
  - Harrison Technical High School.
  - *Harvard School.*
  - Hyde Park High School.
  - *Kenwood Institute.*
  - Lake View High School.
  - Lane Technical High School.
  - *Loyola Academy.*
  - Lucy Flower Technical High School.
  - McKinley High School.
  - Marshall High School.
  - Medill High School.
  - *Morgan Park Academy.*
  - Morgan Park High School.
  - *North Park College Academy.*

- **Chicago**—Continued.
  - Parker High School.
  - *St. Ignatius Academy.*
  - Senn High School.
  - *Starrett School for Girls.*
  - Tilden High School.
  - Tuley High School.
  - R. A. Walker High School.
  - Wendell Phillips High School.
  - *University High School.*
- Chicago Heights—High School (Township).
- Chillicothe—High School (Township).
- Chrisman—High School (Township).
- Cicero—High School (J. S. Morton Township).
- Clayton—High School.
- Clinton—High School.
- Colfax—High School.
- Collinsville—High School (Township).
- Crystal Lake—High School.
- Dallas City—High School.
- Danville—High School.
- Decatur—High School.
- De Kalb—High School (Township).
- Delavan—High School.
- Des Plaines—High School (Maine Township).
- Divernon—High School (Township).
- Dixon—
  - High School.
  - North Dixon High School.
- Downers Grove—High School.
- Dundee—High School.
- Duquoin—High School (Township).
- Dwight—High School.
- Earlville—High School.
- East Moline—High School (Township,
- East St. Louis—High School.
- Edwardsville—High School.
- Effingham—High School.
- Eldorado—High School (Township).
- Elgin—
  - *Elgin Academy.*
  - High School.
- Elizabeth—High School.
- Elmhurst—
  - *Evangelical Proseminar.*
  - High School.
- Elmwood—High School.
- El Paso—High School.
- Equality—High School (Township).
- Eureka—
  - *College Preparatory School.*
  - High School.
- Evanston—
  - *Evanston Academy.*
  - High School (Township).
- Fairbury—High School.
- Farmer City—High School (Township).
- Farmington—High School.
- Fisher—High School.
- Flora—High School (Township).
- Forrest—High School.
- Freeport—High School.
- Fulton—High School.
- Galena—High School.
- Galesburg—High School.
- Galva—High School.
- Geneseo—
  - *Geneseo Collegiate Institute.*
  - High School (Township).
- Geneva—High School.
- Genoa—High School.
- Georgetown—High School (Township).
- Gibson City—High School (Township).
- Gilman—High School.
- Godfrey—*Monticello Seminary.*
- Granite City—High School.
- Grayville—High School.
- Greenfield—High School.
- Greenup—High School.
- Green Valley—High School.
- Greenview—High School.
- Greenville—High School.
- Griggsville—High School.
- Hamilton—High School.
- Harrisburg—High School (Township).
- Harvard—High School.
- Harvey—High School (Township).
- Havana—High School.
- Hebron—High School.
- Henry—High School.
- Herrin—High School (Township).
- Herscher—High School (Township).
- Heyworth—High School.
- Highland—High School.
- Highland Park—High School (Township).
- Hillsboro—High School.
- Hinckley—High School.
- Hindsboro—Union High School.
- Hinsdale—High School (Township).
- Homer—High School.
- Hoopeston—High School.
- Hume—High School.
- Hutsonville—High School (Township).
- Illiopolis—High School.
- Industry—High School (Township).
- Jacksonville—
  - *Academy of the Illinois Woman's College.*
  - High School.
  - *Routt College Academy.*
  - *Whipple Academy.*
- Jerseyville—High School.
- Johnson City—High School.
- Joliet—High School (Township).
- Kankakee—High School.
- Kansas—High School.
- Keithsburg—High School.
- Kenilworth—High School (Township).
- Kewanee—High School.
- Kinmundy—High School.
- Knoxville—High School.
- [Knoxville]—*St. Albans School.*
- Lacon—Union High School.
- La Grange—High School (Township).
- La Harpe—High School.
- Lake Forest—
  - *Ferry Hall.*
  - *Lake Forrest Academy.*
- Lanark—High School.
- La Salle—High School (Township)
- Lawrenceville—High School (Township).
- Lena—High School.
- LeRoy—High School.
- Lewistown—High School.
- Lexington—High School.
- Libertyville—High School.
- Lincoln—High School.
- Litchfield—High School.
- Lockport—High School (Township).

Loda—High School.
Lovington—High School (Township).
McHenry—High School.
McLean—High School.
McLeansboro—High School.
McNabb—John Swaney High School.
Macomb—
  High School.
  Western Illinois State Normal Academy.
Madison—High School.
Magnolia—High School.
Mansfield—High School.
Manteno—High School.
Marengo—High School.
Marion—High School (Township).
Marissa—High School (Township).
Maroa—High School.
Marseilles—High School.
Marshall—High School (Township).
Martinsville—High School.
Mason City—High School.
Mattoon—High School.
Maywood—High School (Township).
Mazon—High School (Township).
Mendon—High School.
Mendota—High School.
Metropolis—High School.
Milford—High School (Township).
Minonk—High School.
Moline—High School.
Momence—High School.
Monmouth—High School.
Monticello—High School.
Morris—High School.
Morrison—High School.
Morrisonville—High School.
Morton—High School (Township).
Mound City—High School.
Mount Carmel—High School.
Mount Carroll—
  Frances Shimer School.
  High School.
Mount Morris—
  College Academy.
  High School.
Mount Pulaski—High School (Township).
Mount Sterling—High School.
Mount Vernon—High School (Township).
Murphysboro—High School (Township).
Naperville—
  High School.
  Northwestern College Academy.
Nashville—High School.
Neoga—High School (Township).
Newman—High School (Township).
Newton—High School.
Nokomis—High School.
Normal—
  High School.
  Normal University High School.
Oak Park—High School (Township).
Oblong—High School (Township).
Odell—High School.
Olney—High School.
Onarga—
  Grand Prairie Seminary.
  High School.
Oregon—High School.
Ottawa—High School (Township).
Palatine—High School.
Palestine—High School.
Pana—High School (Township).
Paris—High School.
Pawnee—High School (Township).
Paw Paw—High School.
Paxton—High School.
Pekin—High School.
Peoria—
  Academy of Our Lady.
  Averyville High School.
  Bradley Polytechnic Institute.
  Central High School.
  Manual Training High School.
Peotone—High School.
Petersburg—High School.
Pittsfield—High School.
Plano—High School.
Polo—High School.
Pontiac—High School (Township).
Princeton—High School (Township).
Princeville—High School.
Prophetstown—High School.
Quincy—
  High School.
  St. Mary's Academy.
Rantoul—High School.
Raymond—High School.
Richmond—High School.
Ridgefarm—High School (Township).
Riverside—High School (Township).
Robinson—High School (Township).
Rochelle—High School.
Rock Falls—High School.
Rockford—
  High School.
  Harlem Consolidated School.
  St. Thomas School.
Rock Island—
  Augustana College Academy.
  High School.
  Villa de Chantal.
Rollo—Consolidated School.
Roodhouse—High School.
Roseville—High School (Township).
Rossville—High School.
Rushville—High School.
St. Anne—High School.
St. Charles—High School.
St. Elmo—High School.
Salem—High School.
Sandwich—High School.
Savanna—High School (Township).
Saybrook—High School.
Sheffield—High School.
Shelbyville—High School.
Sheldon—High School.
Sidell—High School (Township).
Sparta—High School (Township).
Springfield—
  High School.
  Ursuline Academy.
Spring Valley—Hall Township High School.
Stanford—High School.
Staunton—High School.
Sterling—High School (Township).
Stockland—High School (Township).

Stockton—High School.
Stonington—High School.
Streator—High School (Township).
Stronghurst—High School.
Sullivan—High School.
Sycamore—High School.
Taylorville—High School (Township).
Tiskilwa—High School (Joint Township).
Tolono—High School.
Toluca—High School.
Toulon—High School (Township).
Tuscola—High School.
Urbana—High School.
Vandalia—High School.
Vermilion Grove—*Vermilion Academy.*
Vermont—High School.
Vienna—High School (Township).
Villa Grove—High School.
Virden—High School.
Virginia—High School.
Walnut—High School.
Warren—High School.
Warsaw—High School.
Washburn—High School.
Washington—High School.
Waterloo—High School.
Watseka—High School.
Waukegan—High School (Township).
Waverly—High School (Township).
Wenona—High School.
West Chicago—High School.
Westville—High School (Township).
Wheaton—
  High School.
  Wheaton College Academy.
White Hall—High School.
Wilmington—High School.
Woodstock—High School.
Wood River—High School.
Wyoming—High School.
Yorkville—High School.

Public high schools (in addition to those above accredited by the University of Illinois) "recognized" by the State Superintendent of Public Instruction of Illinois.

Requirements for recognition: Building, rooms, library, laboratories, shops, heating, lighting, ventilation, water supply, toilet facilities and janitor service adequate for size of school and what it undertakes to do; school year of not less than 36 weeks; daily recitations in all subjects for which full credit is allowed; recitation periods 40 minutes; admission to the first year on graduation from the eighth grade; graduation on 16 units of real high-school work; full time of at least two assistants besides the principal (or superintendent) given to high-school classes; no teacher to undertake more than seven classes daily; each pupil to carry four studies with daily recitations.

Alexis—High School.
Alvin—High School (Township).
Arenzville—High School.
Armstrong—High School (Township).
Ashley—High School (Township).
Benld—High School (Township).
Blandinsville—High School.
Bunker Hill—High School.
Catlin—High School.
Chapin—High School.
Cobden—High School.
Coffeen—High School.
Columbia—High School.
Cuba—High School.
Fairfield—High School.
Farina—High School.
Flanagan—High School.
Franklin—High School.
Franklin Grove—High School.
Gardner—High School (Township).
Garrett—High School.
Gillespie—High School.
Girard—High School (Township).
Golconda—High School.
Hampshire—High School.
Harlem—High School.
Hull—High School.
Huntley—High School.
Ipava—High School.
Jonesboro—High School.
Kewanee—Wethersfield High School (Township).
Kirkwood—High School.
Lebanon—High School.
Lemont—High School (Township).
Mackinaw—High School (Township).
Manlius—High School (Township).
Mascoutah—High School.
Medora—High School (Township).
Melvin—High School.
Metamora—High School (Township).
Milledgeville—High School.
Minier—High School.
Mounds—High School (Township).
Mount Olive—High School.
Moweaqua—High School.
Murrayville—High School.
Oakland—High School (Township).
O'Fallon—High School.
Orion—High School.
Palmyra—High School.
Pinckneyville—High School.
Piper City—High School.
Plainfield—High School.
Pleasant Hill—High School.
Plymouth—High School.
Potomac—High School.
Ramsey—High School.
Roanoke—High School (Township).
Rutland—High School.
Shabbona—High School.
Sibley—High School (Township).
Somonauk—High School.
Sorento—High School.
Spring Valley—High School (Township).
Tallula—High School.
Thebes—High School (Township).
Tonica—High School.
Towanda—High School.
Tremont—High School.
Trenton—High School.
Versailles—High School.
Waterman—High School.
Waynesville—High School (Township).
Westfield—High School (Township).
Willow Hill—High School (Township).
Winchester—High School.
Wyanet—High School.

INDIANA.

"Commissioned" (approved) by the State department of public instruction for the year 1915-16, and accredited by Indiana University.

	Units.
University admission requirements	16
Prescribed units:	
English	3
Mathematics	2
Foreign language	2
History	1
Science	1
Additional units selected from above subjects	2
Electives	5

Acton—High School.
Advance—High School.
Akron—High School.
Albany—High School.[1]
Albion—High School.
Alexandria—High School.
Ambia—High School.[1]
Amboy—High School.
Amo—High School.
Anderson—High School.
Andrews—High School.
Angola—
  High School.
  Tri-State College.
Arcadia—
  High School.
  Walnut Grove High School.
Argos—High School.
Ashley—High School.[1]
Atlanta—High School.
Attica—
  High School.
  Jackson Township High School.
Auburn—High School.
Aurora—High School.
Avilla—High School.
Batesville—High School.
Battle Ground—High School.
Bedford—High School.
Berne—High School.
Bicknell—High School.
Blackhawk—High School.
Bloomfield—High School.
Bloomingdale—*Academy.*
Bloomington—High School.
Bluffton—High School.
Boone Grove—High School.
Boonville—High School.
Boswell—High School.
Bourbon—High School.
Brazil—High School.
Bremen—High School.
Bringhurst—High School.[1]
Bristol—High School.
Broad Ripple—High School.
Brook—High School.
Brookston—High School.
Brookville—High School.
Brownsburg—High School.[1]
Brownstown—High School.
Bruceville—High School.
Bryant—
  High School.
  Poling High School.
Buck Creek—High School.
Bunker Hill—High School.
Burket—High School.[1]
Burlington—High School.
Burnetts Creek—Burnettsville High School.
Burney—High School.
Butler—High School.
Cambridge City—High School.
Camden—High School.
Campbellsburg—High School.
Cannelton—High School.[1]
Carlisle—Hadden Township Joint High School.
Carmel—High School.
Carthage—High School.
Castleton—High School.
Cayuga—High School.[1]
Centerville—High School.
Chalmers—High School.
Charlestown—High School.[2]
Charlottesville—High School.[1]
Chesterton—High School.
Chrisney—High School.[1]
Churubusco—High School.
Cicero—High School.
Clarksburg—High School.
Clarks Hill—High School.[1]
Clay City—High School.
Claypool—High School.[1]
Clayton—High School.
Clifford—Flatrock Township High School.[1]
Clinton—High School.
Cloverdale—High School.
Coalmont—High School.[2]
Coesse—High School.
Colfax—High School.
Collegeville—*St. Joseph's College.*
Columbia City—High School.
Columbus—High School.
Connersville—High School.
Converse—High School.
Corydon—High School.
Covington—High School.
Cowan—High School.[1]
Crawfordsville—High School.
Crete—Spartansburg High School.
Cromwell—High School.[1]
Crothersville—High School.[1]
Crown Point—High School.
Culver—High School.
Cumberland—High School.
Cutler—High School.[2]
Cynthiana—High School.
Dale—High School.
Daleville—High School.

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[1] Commission expired June 30, 1915.

[2] Commission expired June 30, 1914.

Dana—
    Helt Township High School.
    High School.
Danville—
    Central Normal College, Academic Department.
    High School.
Darlington—High School.
Dayton—High School.[1]
Decatur—High School.
Decker—High School.
Delphi—High School.
Desoto—High School.
Dublin—High School.
Dunkirk—High School.
Earl Park—High School.
East Chicago—High School.
Eaton—High School.[1]
Edinburg—
    High School.
    Mount Auburn High School.
Edwardsport—High School.
Elkhart—High School.
Ellettsville—High School.[1]
Elnora—High School.
Elwood—High School.
Eminence—High School.[1]
Emison—High School.
English—High School.
Etna Green—High School.
Evansville—
    High School.
    High School (colored).
Fairland—
    Boggstown High School.
    High School.
Fairmount—
    Academy.
    High School.
    Theological Institute.
Farmersburg—High School.
Farmland—High School.
Ferdinand—*Academy of the Immaculate Conception.*
Flora—High School.[1]
Fontanet—High School.
Forest—High School.
Fort Branch—High School.
Fortville—High School.
Fort Wayne—
    Central Catholic High School.
    High School.
    St. Augustine Academy.
    St. Catherine's Academy.
Fountain City—High School.
Fowler—
    Academy of Sacred Heart.
    High School.
Francesville—High School.
Francisco—High School.[1]
Frankfort—High School.
Franklin—
    High School.
    Hopewell Township High School.
Frankton—High School.
Freelandville—High School.
Fremont—High School.[1]
French Lick—High School.
Frichton (Vincennes, R. No. 2)—High School.
Galveston—High School.
Garrett—High School.
Gary—High School.
Gas City—High School.
Gaston—High School.
Geneva—High School.
Gilead—High School.
Goldsmith—High School.
Goodland—High School.
Goshen—
    Academy.
    High School.
Gosport—High School.
Grabill—Leo High School.
Grandview—High School.[1]
Grass Creek—High School.
Greencastle—
    De Pauw Academy.
    High School.
Greenfield—
    High School.
    Westland High School.
Greensburg—High School.
Greens Fork—High School.
Greentown—High School.
Greenwood—High School.
Hagerstown—High School.
Hamilton—High School.
Hamlet—High School.
Hammond—
    High School.
    St. Joseph's Academy.
Hanna—High School.
Hanover—*Academy.*
Harlan—High School.
Hartford City—High School.
Hebron—High School.
Hillsboro—High School.
Hobart—High School.
Holton—High School.[1]
Hope—High School.
Howe—Lima High School.
Hudson—High School.
Huntingburg—High School.
Huntington—
    Central College Academy.
    High School.
    Rock Creek Center High School.[1]
Hymera—High School.
Idaville—High School.
Indianapolis—
    Indiana School for Blind.
    Manual Training High School.
    St. Agnes Academy.
    St. John's Academy.
    Shortridge High School.
    Technical High School.
    Tudor Hall.
Inwood—High School.
Ireland—High School.[1]
Jamestown—High School.
Jasonville—High School.
Jasper—
    College.
    High School.

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[1] Commission expired June 30, 1915.

Jeffersonville—High School.
Jonesboro—High School.
Kempton—High School.[1]
Kendallville—High School.
Kentland—High School.
Kewanna—High School.
Kingman—High School.
Kirklin—High School.
Knightstown—High School.
Knox—High School.
Kokomo—High School.
Kouts—High School.
La Crosse—High School.[1]
Ladoga—High School.[1]
Lafayette—
  High School.
  Wea Township High School.
Lafontaine—High School.[1]
Lagrange—High School.
Lake—Luce Township High School.
Lagro—High School.
Laketon—High School.
Lakeville—High School.[1]
La Otto—High School.
Lapel—High School.
Laporte—High School.
Lawrenceburg—High School.
Leavenworth—High School.[1]
Lebanon—High School.
Letts—High School.
Liberty—High School.
Liberty Center—High School.[1]
Ligonier—High School.
Linden—High School.
Linton—High School.
Lizton—High School.
Logansport—
  High School.
  Metea High School.
Loogootee—High School.
Lowell—High School.[1]
Lucerne—High School.[1]
Lynn—High School.
Lyons—High School.
McCordsville—High School.
Madison—
  High School.
  High School (colored).
Manilla—High School.
Marengo—High School.
Marion—
  High School.
  Normal Institute.
Markle—High School.
Martinsville—High School.
Matthews—High School.
Mecca—High School.
Medaryville—High School.
Medora—High School.
Mellott—High School.
Mentone—
  Beaver Dam Township High School.
  High School.
Merom—*Union Christian Academy.*
Michigan City—High School.
Michigantown—High School.[1]
Middlebury—High School.
Middletown—High School.
Milan—High School.
Milford—High School.
Millersburg—High School.[1]
Milroy—High School.
Milton—High School.
Mishawaka—High School.
Mitchell—High School.
Modoc—
  High School.
  Huntsville Township High School.
Monon—High School.
Monroe—High School.
Monroe—City High School.
Monroeville—High School.
Monrovia—High School.[1]
Montezuma—High School.
Monticello—High School.
Montmorenci—High School.
Montpelier—High School.
Moores Hill—*College Academy.*
Moreland—High School.
Mooresville—High School.
Morgantown—High School.
Morocco—High School.
Morristown—High School.
Mount Summit—High School.
Mount Vernon—High School.
Mulberry—
  High School.
  Weidner Institute.
Muncie—
  High School.
  Normal Institute.
  Royerton High School.
Nappanee—High School.
Nashville—High School.
New Albany—
  High School.
  High School (colored).
New Augusta—High School.
Newburg—High School.[2]
New Carlisle—High School.
Newcastle—High School.
New Harmony—High School.
New Haven—High School.
New London—High School.[1]
New Market—High School.
New Paris—High School.[1]
Newport—High School.[1]
New Richmond—High School.
Newtown—High School.
Nineveh—High School.[1]
Noblesville—High School.
North Judson—High School.
North Liberty—High School.
North Manchester—
  Chester Township High School.
  High School.
  Manchester Academy.
North Salem—High School.
North Vernon—High School.
Notre Dame—*St. Mary's Academy.*

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[1] Commission expired June 30, 1915.

[2] Commission expired June 30, 1914.

Oakland City—
  College.
  High School.
Oaklandon—High School.
Oaktown—High School.
Odon—High School.
Oldenburg—*Academy of the Immaculate Conception*
Onward—High School.
Orland—High School.
Orleans—High School.
Osceola—Bango Township High School.
Osgood—High School.[1]
Ossian—High School.
Otterbein—High School.
Otwell—High School.
Owensville—High School.
Oxford—High School.
Paoli—High School.
Paragon—High School.[1]
Parker—Monroe High School.
Pendleton—High School.
Pennville—High School.
Perrysville—Highland Township High School.
Peru—High School.
Petersburg—High School.
Petroleum—High School.
Pimento—High School.
Pine Village—High School.[1]
Plainfield—
  Central Academy.
  High School.
Plainville—
  Epsom Township High School.
  High School.
Pleasant Lake—High School.
Plymouth—High School.
Portland—High School.
Poseyville—High School.
Princeton—
  High School.
  High School (colored).[1]
Pulaski—High School.[1]
Raub—High School.
Redkey—High School.
Remington—High School.
Rensselaer—High School.
Reynolds—High School.[1]
Richmond—High School.
Ridgeville—
  Green Township High School.
  High School.
  Jefferson High School.
Riley—High School.
Rising Sun—High School.
Roachdale—High School.
Roann—High School.
Roanoke—High School.
Rochester—High School.
Rockport—High School.
Rockville—High School.
Rolling Prairie—
  High School.
  Interlaken School.
Rome City—High School.
Romney—High School.
Rosedale—High School.
Rossville—High School.
Royal Center—High School.
Rushville—High School.
Russellville—High School.
Russiaville—High School.[1]
St. Joe—High School.[1]
St. Mary-of-the-Woods—*Academy.*
St. Paul—High School.[1]
Salem—High School.
Sandborn—High School.
Saratoga—High School.[1]
Scircleville—High School.[1]
Scottsburg—High School.
Selma—High School.
Seymour—High School.
Sharpsville—High School.
Shelbyville—High School.
Sheridan—High School.
Shipshewana—High School.
Shoals—High School.
Silver Lake—High School.
Smithville—High School.
South Bend—
  High School.
  St. Joseph's College.
South Milford—High School.
Southport—High School.
South Whitley—High School.[1]
Spencer—High School.
Spencerville—High School.
Spiceland—*Academy.*
Star City—High School.
Staunton—High School.
Stewartsville—High School.
Stilesville—High School.[1]
Stillwell—High School.
Stinesville—High School.
Stockwell—High School.
Straughn—High School.[1]
Sullivan—High School.
Summitville—High School.
Swayzee—High School.
Sweetsers—High School.[1]
Switz City—High School.
Syracuse—High School.
Tangier—High School.
Taylorsville—German Township High School.
Tell City—High School.
Terre Haute—
  Garfield High School.
  Glenn Township High School.
  State Normal High School.
  St. Joseph's Academy.
  Wiley High School.
Thorntown—High School.
Tipton—
  High School.
  St. Joseph's Academy.
Topeka—High School.
Trafalgar—High School.
Twelve Mile—High School.
Union City—
  High School.
  Jackson High School.
  Wayne High School.
Union Mills—High School.

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[1] Commission expired June 30, 1915.

University Heights—*Indiana Central University Academy.*
Upland—
  High School.
  Taylor University.
Urbana—High School.
Valley Mills—High School.
Vallonia—High School.
Valparaiso—
  High School.
  University.
Van Buren—High School.
Veedersburg—High School.
Versailles—High School.
Vevay—High School.
Vincennes—
  High School
  St. Rose Academy.
Wabash—
  Chippewa High School.
  Linlawn High School.
Wadesville—High School.
Wakarusa—High School.[1]
Waldron—High School.
Walkerton—High School.[1]
Wallace—High School.
Walton—High School.[1]
Wanamaker—New Bethel High School.
Wanatah—High School.
Warren—High School.
Warsaw—High School.
Washington—High School.
Waterloo—High School.
Waveland—High School.
Wawaka—High School.
Waynetown—High School.
West Baden—High School.
Westfield—High School.
West Lafayette—High School.
West Lebanon—High School.[1]
West Middleton—High School.[1]
West Newton—High School.
Westpoint—High School.[1]
Westport—High School.[1]
West Terre Haute—High School.[1]
Westville—High School.[1]
Wheatfield—High School.
Wheatland—High School.
Wheeler—High School.
Whiteland—High School.
Whitestown—High School.[1]
White Water—High School.
Whiting—High School.
Wilkinson—High School.[1]
Williamsburg—High School.
Williamsport—High School.[1]
Winamac—High School.
Winchester—
  High School.
  Lincoln High School.
  McKinley High School.
Windfall—High School.
Wingate—High School.
Winona Lake—*Winona College.*
Winslow—High School.[1]
Wolcott—High School.
Wolcottville—High School.
Wolflake—High School.[1]
Woodburn—Maumee Township High School.
Worthington—High School.
Yorktown—High School.
Young America—High School.
Zionsville—High School.

IOWA.

Approved by the State board of education and accredited by the Iowa State University for the year 1915-16.

	Units.
University admission requirements	15
Prescribed units:	
English	3
Mathematics	2½
History	1
Foreign language	2
Electives	6½

Ackley—High School.
Adair—High School.
Adel—High School.
Afton—High School.
Agency—High School.
Albia—High School.
Alden—High School.
Algona—High School.
Allerton—High School.
Alta—High School.
Alton—High School.
Akron—High School.
Ames—High School.
Anamosa—High School.
Anita—High School.
Arthur—High School.
Atlantic—High School.
Audubon—High School.
Aurelia—High School.
Avoca—High School.
Bancroft—*St. John's Parochial School.*
Battle Creek—High School.
Bayard—High School.
Bedford—High School.
Belle Plaine—High School.
Bellevue—High School.
Belmond—High School.
Blairstown—High School.
Blockton—High School.
Bloomfield—High School.
Boone—High School.
Brighton—High School.
Britt—High School.
Brooklyn—High School.
Buffalo Center—High School.
Burlington—High School.

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[1] Commission expired June 30, 1915.

Burt—High School.
Calmar—High School.
Carroll—High School.
Casey—High School.
Castana—High School.
Cedar Falls—
    High School.
    Iowa State Teachers College, Training Department.
Cedar Rapids—High School.
Center Point—High School.
Central City—High School.
Centerville—High School.
Chariton—High School.
Charles City—High School.
Charter Oak—High School.
Cherokee—
    High School.
    Mount St. Mary's.
Cincinnati—High School.
Clarinda—High School.
Clarksville—High School.
Clarence—High School.
Clarion—High School.
Clearfield—High School.
Clear Lake—High School.
Clinton—
    High School.
    Mount St. Claire Academy.
Coggon—High School.
Coin—High School.
Colfax—High School.
College Springs—High School.
Columbus Junction—High School.
Colo—High School.
Conrad—High School.
Coon Rapids—High School.
Corning—High School.
Correctionville—High School.
Corydon—High School.
Council Bluffs—High School.
Cresco—High School.
Creston—High School.
Cumberland—High School.
Dallas Center—High School.
Danbury—High School.
Davenport—
    High School.
    Immaculate Conception Academy.
    St. Ambrose Collegiate Academy.
    St. Katherine's School.
Dayton—High School.
Decorah—High School.
Deep River—High School.
Denmark—High School.
Denison—
    High School.
    Denison Normal School.
Des Moines—
    East High School.
    North High School.
    West High School.
    Grand View Academy.
    St. John's High School.
    St. Joseph's Academy.
De Witt—High School.
Dexter—High School.
Dows—High School.
Dubuque—
    College High School.
    High School.
    Mount St. Joseph's Academy.
    St. Joseph's Academy.
Dunlap—High School.
Dysart—High School.
Eagle Grove—
    High School.
    Sacred Heart High School.
Earlham—High School.
Eddyville—High School.
Eldon—High School.
Eldora—High School.
Elkader—High School.
Elliott—High School.
Emerson—High School.
Emmetsburg—High School.
Epworth—*Seminary.*
Essex—High School.
Estherville—High School.
Everly—Consolidated High School.
Exira—High School.
Fairfield—
    High School.
    Parsons College Academy.
Farmington—High School
Farragut—High School.
Fayette—High School.
Fonda—High School.
Forest City—
    High School.
    Waldorf College.
Fort Dodge—High School.
Fort Madison—High School.
Fremont—High School.
Galva—High School.
Garden Grove—High School.
Garner—High School.
George—High School.
Gilmore City—High School.
Gladbrook—High School.
Glenwood—High School.
Glidden—High School.
Grand Junction—High School.
Greene—High School.
Greenfield—High School.
Griswold—High School.
Grinnell—High School.
Grundy Center—High School.
Gutherie Center—High School.
Guttenberg—High School.
Hamburg—High School.
Hampton—High School.
Harlan—High School.
Hartley—High School.
Hawarden—High School.
Hedrick—High School.
Hiteman—High School.
Holstein—High School.
Hopkinton—*Lenox College Academy.*
Hubbard—High School.
Hull—High School.
Humboldt—High School.
Humeston—High School.
Ida Grove—High School.

Independence—High School.
Indianola—High School.
Inwood—High School.
Iowa City—
    High School.
    Iowa City Academy.
    St. Mary's High School.
    St. Patrick's High School.
Iowa Falls—
    High School.
    Ellsworth Academy.
Ireton—High School.
Jefferson—High School.
Jewell—
    High School.
    Jewell Lutheran College.
Keokuk—
    High School.
    St. Peter's High School.
Keosauqua—High School
Keota—High School.
Kingsley—High School.
Knoxville—High School.
Lake City—High School.
Lake Mills—High School.
Lake Park—High School.
Lamoni—High School.
Lansing—High School.
Laporte City—High School.
Larchwood—High School.
Laurens—High School.
Lehigh—High School.
Le Mars—
    High School.
    Western Union College Academy.
Lenox—High School.
Leon—High School.
Lisbon—High School.
Livermore—High School.
Logan—High School.
Lohrville—High School.
Luverne—High School.
Lyons—
    High School.
    Our Lady of Angels Academy.
Malvern—High School.
Manchester—High School.
Manilla—High School.
Manning—High School.
Manson—High School.
Mapleton—High School.
Maquoketa—High School.
Marathon—High School.
Marcus—High School.
Marengo—High School.
Marion—High School.
Marshalltown—High School.
Mason City—High School.
McGregor—High School.
Mechanicsville—High School.
Mediapolis—High School.
Milford—High School.
Milo—High School.
Missouri Valley—High School.
Mondamin—High School.
Monona—High School.
Monroe—High School.
Montezuma—High School.
Monticello—High School.
Morning Sun—High School.
Moulton—High School.
Mount Ayr—High School.
Mount Pleasant—High School.
Mount Vernon—High School.
Murray—High School.
Muscatine—High School.
Nashua—High School.
Neola—High School.
Nevada—High School.
Newell—High School.
New Hampton—High School.
New London—High School.
New Providence—High School.
New Sharon—High School.
Newton—High School.
Nora Springs—High School.
North English—High School.
Northwood—High School.
Oakland—High School.
Odebolt—High School.
Oelwein—High School.
Ogden—High School.
Olin—High School.
Onawa—High School.
Orange City—
    High School.
    North Western Classical Academy.
Orient—High School.
Osage—
    Cedar Valley Seminary.
    High School.
Osceola—High School.
Oskaloosa—
    High School.
    Penn College Academy.
Ottumwa—High School.
Oxford—High School.
Panora—High School.
Parkersburg—High School.
Paullina—High School.
Pella—High School.
Perry—High School.
Pocahontas—High School.
Pomeroy—High School.
Postville—High School.
Prairie City—High School.
Preston—High School.
Primghar—High School.
Radcliffe—High School.
Randolph—High School.
Red Oak—High School.
Reinbeck—High School.
Riceville—High School.
Riverton—High School.
Rockford—High School.
Rock Rapids—High School.
Rock Valley—High School.
Rockwell City—High School.
Roland—High School.
Rolfe—High School.

Ruthven—High School.
Sabula—High School.
Sac City—High School.
St. Ansgar—High School.
Salem—High School.
Salix—High School.
Sanborn—High School.
Schaller—High School.
Seymour—High School.
Sheffield—High School.
Shelby—High School.
Sheldon—High School.
Shell Rock—High School.
Shenandoah—High School.
Sibley—High School.
Sidney—High School.
Sigourney—High School.
Sioux Center—High School.
Sioux City—
  Cathedral School.
  High School.
Sioux Rapids—High School.
Sloan—High School.
Spencer—High School.
Spirit Lake—High School.
Springville—High School.
Stanton—High School.
Stanwood—High School.
State Center—High School.
Storm Lake—High School.
Story City—High School.
Strawberry Point—High School.
Stuart—High School.
Sumner—High School.
Sutherland—High School.
Tabor—High School.
Tama—High School.
Tipton—High School.
Toledo—High School.
Traer—High School.
Union—High School.
University Park—*Central Holiness Academy.*
Ute—High School.
Vail—High School.
Valley Junction—High School.
Victor—High School.
Villisca—High School.
Vinton—
  High School.
  Tilford Academy.
Walker—High School.
Walnut—High School.
Wapello—High School.
Washington—High School.
Waterloo—
  (East)—High School.
  (West)—High School.
Waukon—High School.
Waverly—
  High School.
  Watburg College Academy.
Webster City—High School.
Wellman—High School.
West Bend—High School.
West Branch—High School.
West Liberty—High School.
West Side—High School.
West Union—High School.
What Cheer—High School.
Whiting—High School.
Williamsburg—High School.
Wilton—High School.
Winfield—High School.
Winterset—High School.
Woodbine—High School.

KANSAS.

Accredited by the State Board of Education and the University of Kansas, for the year 1915-16.

	Units.
University admission requirements	15
No subjects prescribed, but the following (together with the indicated unit values) recommended:	
English	3
Mathematics	2½
Foreign language	3
Science	2
History and social science	1
Electives	3½

("All students graduating from high schools in class A or class B are admitted to the State institutions without examination upon presentation of a certificate showing that they have completed at least 15 units of regular high-school work.")

CLASS A.

Abilene—High School.
Alma—High School.
Altamont—Labette County High School.
Anthony—High School.
Argentine—High School.
Arkansas City—High School.
Ashland—High School.
Atchison—High School.
Augusta—High School.
Belleville—High School.
Beloit—High School.
Burlington—High School.
Caney—High School.
Chanute—High School.
Chapman—Dickinson County High School.
Cherokee—Crawford County High School.
Cherryvale—High School.
Clay Center—Clay County High School.
Coffeyville—High School.
Colby—Sumner County High School.
Columbus—Cherokee County High School.
Concordia—High School.
Cottonwood Falls—Chase County High School
Council Grove—High School.

Dodge City—High School.
Effingham—Atchison County High School.
El Dorado—High School.
Ellsworth—High School.
Emporia—High School.
Eskridge—High School.
Eureka—High School.
Fort Scott—High School.
Frankfort—High School.
Fredonia—High School.
Galena—High School.
Garden City—High School.
Garnett—High School.
Girard—High School.
Goodland—Sherman County Hign School.
Great Bend—High School.
Greensburg—Kiowa County High School.
Hays—High School.
Herrington—High School.
Hiawatha—High School.
Hoisington—High School.
Holton—High School.
Horton—High School.
Humboldt—High School.
Hutchinson—High School.
Independence—Montgomery County High School.
Iola—High School.
Jewell City—High School.
Junction City—High School.
Kansas City—
  High School.
  Sumner High School (colored).
Kingman—High School.
Kinsley—High School.
Larned—High School.
Lawrence—High School.
Leavenworth—High School.
Lincoln—High School.
Lindsborg—High School.
Lyons—High School.
Manhattan—High School.
Marion—High School.
Marysville—High School.
McPherson—High School.
Minneapolis—High School.
Neodesha—High School.
Newton—High School.
Nickerson—Reno County High School.
Norton—County High School.
Oberlin—Decatur County High School.
Olathe—High School.
Osborne—High School.
Ottawa—High School.
Paola—High School.
Parsons—High School.
Peabody—High School.
Pittsburg—High School.
Pratt—High School.
Rosedale—High School.
Russell—High School.
Sabetha—High School.
St. John—High School.
Salina—High School.
Seneca—High School.
Smith Center—High School.
Stafford—High School.
Sterling—High School.
Topeka—High School.
Valley Falls—High School.
Wa Keeney—Trego County High School.
Washington—High School.
Wellington—Sumner County High School.
Wichita—High School.
Winfield—High School.
Yates Center—High School.

CLASS B—RANK I.[1]

Alden—High School.
Almena—High School.
Alta Vista—High School.
Altoona—High School.
Argonia—Dixon Township High School.
Attica—High School.
Atwood—Rawlins County High School.
Axtell—High School.
Baldwin—High School.
Belle Plaine—High School.
Blue Rapids—High School.
Bonner Springs—High School.
Bucklin—High School.
Burlingame—High School.
Caldwell—High School.
Canton—High School.
Cawker City—High School.
Cedar Vale—High School.
Centralia—High School.
Cimarron—High School.
Clearwater—High School.
Clifton—High School.
Coldwater—High School.
Douglass—High School.
Downs—High School.
Ellinwood—High School.
Ellis—High School.
Erie—High School.
Fairview—High School.
Florence—High School.
Formoso—High School.
Fowler—High School.
Frontenac—High School.
Gas—High School.
Halstead—High School.
Harper—High School.
Hartford—High School.
Highland—High School.
Howard—High School.
Kincaid—High School.
Lakin—High School.
Liberal—High School.
Lyndon—High School.
Macksville—High School.
Mankato—High School.
McLouth—High School.
Meade—High School.
Medicine Lodge—High School.

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[1] Four-year high schools which are accredited, but which on account of financial and other considerations do not provide courses of study covering all departments of secondary work or in which there is not the same degree of permanency and efficiency in general administration.

Moline—High School.
Ness City—High School.
Oakley—High School.
Onaga—High School.
Osage City—High School.
Ossawatomie—High School.
Oskaloosa—High School.
Phillipsburg—High School.
Plainville—High School.
Pleasanton—High School.
Reading—High School.
Robinson—High School.
Rose Hill—High School.
Rossville—High School.
Sedan—High School.
Sedgwick—High School.
Solomon—High School.
Stockton—High School.
Tonganoxie—High School.
Troy—High School.
Wamego—High School.
Waterville—High School.
Wathena—High School.
Wellsville—High School.
Wetmore—High School.
White Cloud—High School.
White Water—High School.
Williamsburg—High School.
Wilson—Ellsworth County High School.

CLASS B—RANK II.

Alton—High School.
Atlanta—High School.
Anthony—Spring Township High School.
Basehor—High School.
Belpre—High School.
Beverly—High School
Bronson—High School.
Brookville—High School.
Buffalo—High School.
Burden—High School.
Burns—High School.
Burr Oak—High School.
Burrton—High School.
Carbondale—High School.
Chase—High School.
Cheney—High School.
Circleville—High School.
Claflin—High School.
Clyde—High School.
Colony—High School.
Conway Springs—High School.
Cunningham—High School.
Delphos—High School.
Derby—High School.
Dexter—High School.
Dighton—Lane County High School.
Easton—High School.
Edwardsville—High School.
Elwood—High School.
Englewood—High School.
Everest—High School.
Geneseo—High School.
Glasco—High School.
Glen Elder—High School.
Goddard—High School.
Greenleaf—High School.
Gypsum—High School.
Hamilton—High School.
Hanover—High School.
Harveyville—High School.
Hazelton—High School.
Hill City—High School.
Hillsboro—High School.
Hoxie—Sheridan County High School.
Jetmore—High School.
Kiowa—High School.
La Crosse—High School.
La Cygne—High School.
La Harpe—High School.
Lansing—High School.
Latham—High School.
Lebanon—High School.
Lebo—High School.
Leon—High School.
Le Roy—High School.
Lewis—High School.
Linwood—High School.
Little River—High School.
Logan—High School.
Lucas—High School.
Luray—High School.
Madison—High School.
Marquette—High School.
Melvern—High School.
Meriden—High School.
Moran—High School.
Morrill—High School.
Mound City—High School.
Moundridge—High School.
Mount Hope—High School.
Mulberry—High School.
Mulvane—High School.
Natoma—High School.
Neosho Falls—High School.
Nortonville—High School.
Norwich—High School.
Oakland—High School.
Oswego—High School.
Overbrook—High School.
Oxford—High School.
Pawnee Rock—High School.
Perry—High School.
Pomona—High School.
Protection—High School.
Randolph—High School.
St. Francis—Cheyenne County High School.
St. Marys—High School.
Scott—Scott County High School.
Severance—High School.
Severy—High School.
Sharon—High School.
Sharon Springs—High School.
Soldier—High School.
Spearville—High School.
Spivey—High School.
Spring Hill—High School.
Syracuse—High School.
Toronto—High School.
Towanda—High School.
Tribune—Greeley County High School.
Udall—High School.
Valley Center—High School.
Westmoreland—High School.
White City—High School.
Winchester—High School.

CLASS B—RANK III.

Admire—High School.
Americus—High School.
Andover—High School.
Assaria—High School.
Barnard—High School.
Bazine—High School.
Beattie—High School.
Benedict—High School.
Blue Mound—High School.
Brownell—High School.
Bunker Hill—High School.
Chetopa—High School.
Corning—High School.
Courtland—High School.
Cuba—High School.
Edna—High School.
Elsmore—High School.
Enterprise—High School.
Esbon—High School.
Eudora—High School.
Garden Plain—High School.
Gardner—High School.
Goff—High School.
Grenola—High School.
Haven—High School.
Havensville—High School.
Hope—High School.
Hugoton—High School.
Ingalls—High School.
Irving—High School.
Jamestown—High School.
Kipp—High School.
Lecompton—High School.
Leoti—Wichita County High School.
Longton—High School.
Lost Springs—High School.
Maize—High School.
Maple Hill—High School.
McCracken—High School.
McCune—High School.
Merriam—High School.
Mildred—High School.
Milton—High School.
Minneola—High School.
Morehead—High School.
Mound Valley—High School.
Muscotah—High School.
Neosho Rapids—High School.
New Ulysses—Grant County High School.
Oneida—High School.
Ozawkie—High School.
Palco—High School.
Portis—High School.
Potwin—High School.
Powhattan—High School.
Preston—High School.
Quenemo—High School.
Quincy—High School.
Quinter—High School.
Ramona—High School.
Randall—High School.
Ransom—High School.
Redfield—High School.
Republic—High School.
Rock Creek—High School.
Russell Springs—High School.
Savonburg—High School.
Scandia—High School.
Scranton—High School.
Silver Lake—High School.
Stark—High School.
Summerfield—High School.
Sylvan Grove—High School.
Tescott—High School.
Thayer—High School.
Utica—High School.
Vermilion—High School.
Viola—High School.
Virgil—High School.
Waldo—High School.
Walnut—High School.
Walton—High School.
Weir—High School.
Whiting—High School.
Winona—High School.

Academies and private institutions accredited, but not classified:

Baldwin—*Baker University Academy.*
Concordia—*Nazareth Academy.*
Hesston—*Academy.*
Kansas City—*Catholic High School.*
Leavenworth—
    Cathedral High School.
    St. Mary's Academy.
Newton—*Bethel College Academy.*
Ottawa—*University Academy.*
Paola—*Ursuline Academy.*
Salina—*Sacred Heart Academy.*
Topeka—*Washburn College Academy.*
Wichita—*Friends University Academy.*
Winfield—*Southwestern Academy.*

KENTUCKY.

Accredited by the University of Kentucky, January, 1916.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2½
Foreign language	4
History	1
Science	1
Electives	3½

CLASS A.

Ashland—High School
Auburn—County High School.
Augusta—High School.
Barboursville—
  Baptist Institute.
  Union College.
Bowling Green—
  High School.
  Ogden College.
  Western Kentucky Normal.
Campbellville—*Russell Creek Academy.*
Carlisle—High School.
Carrollton—High School.
Catlettsburg—High School.
Central City—High School.
Clinton—*Marvin University School.*
Columbia—*Lindsey-Wilson.*
Corydon—High School.
Covington—High School.
Cynthiana—High School.
Dawson Springs—High School.
Dayton—High School.
Elizabethtown—Hardin County High School.
Elkton—
  High School.
  Vanderbilt Training School.
Falmouth—High School.
Flemingsburg—High School.
Frankfort—High School.
Franklin—High School.
Frenchburg—*High School.*
Fulton—High School.
Georgetown—
  Cardome Academy.
  High School.
Glasgow—High School.
Greenville—High School.
Hardinsburg—County High School.
Harrodsburg—High School.
Hartford—High School.
Henderson—High School.
Hopkinsville—High School.
Jackson—*Collegiate Institute.*
La Grange—High School.
Lancaster—High School.
Lawrenceburg—
  City High School.
  County High School.
Lebanon—High School.
Lexington—
  Hamilton College.
  High School.
  Sayre College.
London—*Sue Bennet Memorial.*
Louisa—High School.
Louisville—
  Girls' High School.
  Kentucky Home School for Girls.
  Male High School.
  St. Xavier College.
  Semple Collegiate School.
  Training School.
Ludlow—High School.
Lyndon—*Kentucky Military Institute.*
Madisonville—High School.
Mayfield—High School.
Maysville—High School.
Middlesboro—High School.
Midway—
  High School.
  Kentucky Female Orphan School.
Millersburg—
  Female College.
  Military Institute.
Morganfield—High School.
Mount Sterling—High School.
Murray—High School.
Nazareth—*Nazareth Academy.*
Nerinx—*Loretto Academy.*
Newport—
  Academy Notre Dame of Providence.
  Bellevue High School.
  High School.
Nicholasville—High School.
Owensboro—High School.
Owenton—High School.
Paducah—High School.
Paris—High School.
Pikeville—*Academy.*
Princeton—High School.
Richmond—
  Caldwell High School.
  Eastern Kentucky Normal.
  Model High School.
Russellville—*Bethel College, Preparatory Department.*
St. Mary's—*College.*
Shelbyville—
  High School.
  Science Hill.
Somerset—High School.
Springfield—High School.
Stanford—High School.
Stanton—*College.*
Sturgis—High School.
Versailles—*Margaret College.*
Williamsburg—*Cumberland College.*
Wilmore—*Ashbury College Academy.*
Winchester—High School.

CLASS B.[1]

Adairville—High School.
Alexandria—County High School.
Arlington—High School.
Bardstown—High School.
Barlow—High School.
Beaver Dam—Western Kentucky Seminary.
Bedford—Trimble County High School.
Benton—High School.
Bloomfield—High School.
Brandenberg—County High School.
Brooksville—High School.
Burlington—County High School.
Butler—High School.
Cadiz—High School.
Calhoun—High School.
Campbellsburg—*High School.*
Campbellsville—County High School.
Clay—High School.
Clinton—County High School.
Cloverport—High School.
Columbia—High School.
Danville—High School.
Dixon—High School.
Dry Ridge—County High School.
Earlington—High School.
Edmonton—County High School.
Eminence—High School.
Erlanger—High School.
Fordsville—High School.
Fort Thomas—Highlands High School.
Franklin—*Training School.*
Grayson—High School.
Guthrie—High School.
Harlan—County High School.
Hawesville—Beechmont High School.
Hazel Green—Academy.
Heath—County High School.
Hickman—High School.
Hindman—Settlement School.
Hodgenville—High School.
Horse Cave—High School.
Independence—High School.
Junction City—High School.
La Center—County High School.
Leitchfield—High School.
Lewisburg—County High School.
Lexington-Picadome—County High School.
Little Rock—Graded High School.
Livermore—High School.
London—Graded High School.
Louisville—*Holy Rosary Academy.*
Marion—High School.
Mayslick—County High School.
Minerva—County High School.
Monticello—High School.
Morehead—Normal School.
Morgantown—High School.
Mount Sterling—County High School.
Mount Vernon—High School.
Munfordsville—High School.
New Castle—High School.
Nicholasville—*Boys' School.*
North Middletown—*Classical and Business College.*
Owensboro—County High School.
Owingsville—City High School.
Paintsville—
    High School.
    Sandy Valley Seminary.
Pembroke—High School.
Pineville—High School.
Providence—High School.
Richmond—*Madison Institute.*
Salyersville—*Magoffin Institute.*
Sedalia—High School.
Sebree—High School.
Sharpsburg—High School.
Smiths Grove—County High School.
St. Helens—High School.
Scottsville—High School.
Tompkinsville—High School.
Uniontown—County High School.
Utica—County High School.
Vanceburg—County High School.
Versailles—High School.
Vine Grove—High School.
Walton—County High School.
Warsaw—High School.
Water Valley—County High School.
West Liberty—High School.
Whitesville—County High School.
Williamstown—High School.
Wingo—High School.
Wickliffe—High School.

LOUISIANA.

Approved by the State board of education and accredited by the University of Louisiana for the year 1915-16.

	Units.
University admission requirements	14
Prescribed units:	
English	3
Mathematics	2½
Foreign language	2
History	1
Electives	5½

Abbeville—High School.
Alexandria—High School.
Amite—High School.
Arcadia—High School.
Ashland—High School.
Athens—High School.
Bastrop—High School.
Baton Rouge—
    Central High School.
    High School.

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[1] The requirements for approval of schools of this class are practically the same as those for the Class A schools, the main difference being that they require but two teachers who must devote their full time to high-school subjects. The session is six weeks longer than that of the Class A schools.

Baywood—High School.
Benton—High School.
Bernice—High School.
Bienville—High School.
Bogalusa—High School.
Boyce—High School.
Breaux Bridge—High School.
Brusly—High School.
Bunkie—High School.
Calhoun—High School.
Campti—High School.
Cataro—Grand Prairie High School.
Cheneyville—High School.
Choudrant—High School.
Clinton—High School.
Colfax—High School.
Colcomb—Romeville High School.
Columbia—High School.
Cotton Valley—High School.
Coushatta—High School.
Covington—High School.
Crowley—High School.
Deerford—High School.
Delhi—High School.
Denham Springs—High School.
De Quincy—High School.
De Ridder—High School.
Dodson—High School.
Donaldsonville—High School.
Doyline—High School.
Dubach—High School.
Dutchtown—High School.
Ebenezer—High School.
Eros—High School.
Eunice—High School.
Evergreen—High School.
Farmerville—High School.
Florien—High School.
Forest Hill—High School.
Franklin—High School.
Franklinton—High School.
Georgetown—High School.
Gibsland—High School.
Goldonna—High School
Gonzales—High School.
Grand Cane—High School.
Grayson—High School.
Gretna—High School.
Gueydan—High School.
Hammond—High School.
Harrisonburg—High School.
Haughton—High School.
Haynesville—High School.
Homer—High School.
Hope Villa—Oak Grove High School.
Hornbeck—High School.
Houma—Terrebonne High School.
Independence—High School.
Iota—High School.
Jackson—High School.
Jeanerette—High School.
Jeno—High School.
Jennings—High School.
Kinder—High School.
Labadieville—High School.
Lake Arthur—High School.
Lake Charles—High School.
Lake Providence—High School.
Lecompte—High School.
Leesville—
  Bellevue High School.
  High School.
Lillie—High School.
Logansport—High School.
Longstreet—High School.
Lutcher—High School.
Mansfield—High School.
Mansura—High School.
Many—High School.
Marion—High School.
Marksville—High School.
Marthaville—High School.
Melville—High School.
Mer Rouge—High School.
Merryville—High School.
Minden—High School.
Mineral—Wallace High School.
Monroe—High School.
Monterey—Central High School.
Morgan City—High School.
Morse—High School.
Napoleonville—High School.
New Iberia—High School.
Oakdale—High School.
Opelousas—High School.
Patterson—High School.
Pelican—High School.
Pitkin—High School.
Plain Dealing—High School.
Plaquemine—High School.
Pleasant Hill—High School.
Pollock—High School.
Ponchatoula—High School.
Pride—High School.
Rayne—High School.
Ravyille—High School.
Reserve—High School.
Robelin—High School.
Saline—High School.
Shreveport—High School.
Simsboro—High School.
Slidell—High School.
Spring Hill—High School.
Stonewall—High School.
St. Francisville—High School.
St. Joseph—High School.
St. Martinville—High School.
Sulphur—High School.
Tallulah—High School.
Thibodaux—High School.
Verda—High School.
Vidalia—High School.
Vidrine—High School.
Ville Platte—High School.
Vinton—High School.
Vivian—High School.
Washington—High School.
Welsh—High School.
Westlake—High School.
White Castle—High School.
Winnfield—High School.
Winnsboro—High School.
Zachary—High School.
Zwolle—High School.

Supplementary list of secondary schools accredited by the University of Louisiana.

"Graduates of each of the following secondary schools who have completed the four-year high-school course, or the equivalent, with admission credits amounting to 14 units, will be admitted to the freshman class."

Baton Rouge—*St. Vincent's Academy.*
Donaldsonville—*St. Joseph's Commercial Institute.*
Gulfport—*Gulf Coast Military Academy.*
Houma—*Lorton Preparatory School.*
Kentwood—High School.
Monroe—Monroe City High School.
New Orleans—
  Boys' High School.
  Girls' High School.
  Chenet Institute.
New Orleans—Continued.
  Ferrell's School.
  Harris Preparatory School.
  Holy Cross College.
  Home Institute.
  Isidore Newman Manual Training School.
  Rugby Academy.
New Roads—*Poydras Academy.*
Port Gibson—*Chamberlain-Hunt Academy.*
Washington—*Jefferson Military Academy.*

MAINE.

"Class A" schools approved by the State superintendent of schools, for the year 1915-16. "Graduates of schools in class A may be admitted (to the University of Maine) upon their school records, provided they pursue a course of study including all the subjects required for admission to the college that they propose to enter, and a sufficient number of elective subjects to make up a total of 14 units."

Prescribed units:	
English	3
Mathematics	2½
Foreign language	4
History	1
Elective	3½

Abbot Village—High School.
Addison—High School.
Albion—High School.
Alfred—High School.
Ashland—High School.
Athens—*Somerset Academy.*
Auburn—High School.
Augusta—High School.
Bangor—High School.
Bar Harbor—Eden High School.
Bath—High School.
Belfast—High School.
Belgrade—High School.
Berwick—High School.
Bethel—*Gould's Academy.*
Biddeford—High School.
Bingham—High School.
Bluehill——*Bluehill-George Stevens Academy.*
Boothbay Harbor—High School.
Bowdoinham—High School.
Bradford—High School.
Brewer—High School.
Bridgton—High School.
Bridgewater Center—*Bridgewater Classical Institute.*
Bristol—High School.
Brookin—High School.
Brooks—High School.
Brooksville—High School.
Brownville—High School.
Brunswick—High School.
Bryant Pond—Woodstock High School.
Buckfield—High School.
Buxton Center—Buxton High School.
Bucksport—*East Maine Conference Seminary.*
Calais—*Academy.*
Camden—High School.
Caribou—High School.
Casco—High School.
Castine—High School.
Charleston—*Higgins Classical Institute.*
Cherryfield—*Cherryfield Academy.*
Clinton—High School.
Columbia Falls—High School.
Corinna—*Corinna Union Academy.*
Cornish—High School.
Cumberland Center—*Greeley Institute.*
Danforth—High School.
Deer Isle—High School.
Dexter—High School.
Dixfield—High School.
Dresden Mills—*Bridge Academy.*
East Corinth—*East Corinth Academy.*
East Machias—*Washington Academy.*
Easton—High School.
Eastport—High School.
Eliot—High School.
Ellsworth—High School.
Eustis—High School.
Exeter—High School.
Fairfield—High School.
Farmington—High School.
Fort Fairfield—High School.
Foxcroft—*Foxcroft Academy.*
Frankfort—High School.
Franklin—High School.
Freedom—*Freedom Academy.*
Freeport—High School.
Fryeburg—*Fryeburg Academy*
Gardiner—High School.
Garland—High School,
Gorham—High School.
Gray—*Pennell Institute.*
Greenville—High School.
Guilford—High School.
Hallowell—High School.

Hampden—*Academy.*
Harmony—High School.
Harrington—High School.
Hartland—*Academy.*
Hebron—*Academy.*
Hinckley—*Good Will High School.*
Hollis Center—Hollis High School..
Houlton—
    High School.
    Ricker Classical Institute.
Island Falls—High School.
Islesboro—High School.
Jay—High School.
Jonesboro—High School.
Jonesport—High School.
Kennebunk—High School.
Kennebunkport—High School.
Kents Hill—*Maine Wesleyan Seminary.*
Kezar Falls—Porter High School.
Kingfield—High School.
Kingman—High School.
Kittery—*Traip Academy.*
Lee—*Lee Academy.*
Lewiston—High School.
Limerick—*Limerick Academy.*
Limestone—High School.
Limington—*Limington Academy.*
Lincoln—*Mattanawcook Academy.*
Lisbon—High School.
Lisbon Falls—High School.
Litchfield—*Litchfield Academy.*
Livermore Falls—East Livermore High School.
Lubec—High School.
Machias—High School.
Madison—High School.
Mars Hill—*Aroostook Central Institute.*
Mattawamkeag—High School.
Mechanic Falls—High School.
Mexico—High School.
Millbridge—High School.
Millinocket—High School.
Milo—High School.
Monmouth—*Monmouth Academy.*
Monson—*Monson Academy.*
Newcastle—*Lincoln Academy.*
New Gloucester—High School.
Newport—High School.
New Sharon—High School.
Norridgewock—High School.
North Anson—*Anson Academy.*
North Berwick—High School.
North Bridgton—*Bridgton Academy.*
Northeast Harbor—Mount Desert High School.
North Lebanon—High School.
Norway—High School.
Oakland—High School.
Old Orchard—High School.
Old Town—High School.
Orono—High School.
Oxford—High School.
Parsonsfield—*Parsonsfield Seminary.*
Patten—*Patten Academy.*
Penobscot—High School.
Phillips—High School.
Pittsfield—*Maine Central Institute.*
Portland—
    Deering High School.
    High School.
    St. Joseph's Academy.
    Westbrook Seminary.
Presque Isle—High School.
Princeton—High School.
Rangeley—High School.
Richmond—High School.
Rockland—High School.
Rockport—High School.
Rumford—High School.
Sabattus—Webster High School.
Saco—*Thornton Academy.*
Sanford—High School.
Sangerville—High School.
Scarboro—High School.
Searsport—High School.
Sebago—*Potter Academy.*
Sherman—High School.
Skowhegan—High School.
Solon—High School.
South Berwick—*Berwick Academy.*
South China—*Erskine Academy.*
South Paris—Paris High School.
South Portland—
    Cape Elizabeth High School.
    High School.
Southwest Harbor—High School.
South Windham—Windham High School.
Springfield—*Eastern Maine Institute.*
Standish—High School.
Stonington—High School.
Strong—High School.
Tenants Harbor—St. George High School.
Thomaston—High School.
Topsham—High School.
Turner Center—*Leavitt Institute.*
Unity—High School.
Vanceboro—High School.
Vassalboro—*Oak Grove Seminary.*
Vinalhaven—High School.
Waldoboro—High School.
Warren—High School.
Washburn—High School.
Waterville—
    Coburn Classical Institute.
    High School.
Weld—High School.
Wells—High School.
Westbrook—High School.
West Sullivan—Sullivan High School.
Wilton—*Wilton Academy.*
Winslow—High School.
Winter Harbor—High School.
Winterport—High School.
Winthrop—High School.
Wiscasset—*Wiscasset Academy.*
Yarmouthville—
    Yarmouth High School.
    North Yarmouth Academy.
York Village—York High School.

MARYLAND.

First group—Public high schools approved by the State Board of Education of Maryland, May, 1916.

Conditions of approval of "First group" schools: A bona fide enrollment of 80 or more students; 4 or more academic teachers—full time or equivalent; a 4-years' course of at least 36 actual school weeks in each year; courses of study to conform to those prescribed by the State board of education; sufficient library and laboratory facilities.

Annapolis—High School.
Baltimore—
  City College.
  Eastern High School.
  High and Training School (colored).
  Polytechnic Institute.
  Western High School.
Brunswick—High School.
Cambridge—High School.
Catonsville—High School.
Centerville—High School.
Chestertown—High School.
Crisfield—High School.
Cumberland—Allegany County High School.
Denton—Caroline County High School.
Easton—High School.
Elkton—Cecil County High School.
Ellicott City—High School.
Frederick—
  Boys' High School.
  Girls' High School.
Frostburg—Beall High School.
Hagerstown—
  Boys' High School.
  Girls' High School.
Havre de Grace—High School.
Laurel—High School.
Lonaconing—Central High School.
Middletown—High School.
Oakland—High School.
Pocomoke City—High School.
Reisterstown—Franklin High School.
Rockville—Montgomery County High School.
Salisbury—Wicomico County High School.
Snow Hill—High School.
Sparrows Point—High School.
Towson—High School.
Westminster—High School.

Second group—Recommended by the board of education as equipped to offer 14 units of college preparatory work.

Aberdeen—High School.
Bel Air—High School.
Boonsboro—High School.
Berlin—Buckingham High School.
Chesapeake City—High School.
Chevy Chase—High School.
Clear Spring—High School.
Delmar—High School.
Federalsburg—High School.
Gaithersburg—High School.
Hurlock—High School.
Hyattsville—High School.
Marlboro—High School.
Nanticoke—High School.
North East—High School.
Oxford—High School.
Princess Anne—Washington High School.
Queen Anne—Tri-county High School.
Rock Hall—High School.
Sharptown—High School.
St. Michaels—High School.
Sandy Spring—Sherwood High School.
Stockton—High School.
Sudlersville—High School.
Thurmont—High School.
Trappe—High School.
Vienna—High School.

MASSACHUSETTS.

Public high schools not on the New England College Entrance Certificate Board list[1] issued May 20, 1915, but approved by the State Board of Education of Massachusetts for the privilege of normal-school certification.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Electives—from the following subjects at least	7
Biology, botany or zoology, physical geography, physiology and hygiene, general science, drawing, commercial geography, and arithmetic, ½ to 1 unit; algebra, physics, chemistry, manual training, and bookkeeping, 1 unit; stenography and household arts, 1 or 2 units; history, 1, 2, or 3 units; French and German, 2 or 3 units; Latin, 2, 3, or 4 units.	
Additional subjects—from the above or other subjects approved by the high school toward the diploma of graduation	5

Amesbury—High School.
Ashfield—High School.
Avon—High School.
Billerica—High School.
Boston—High School of Practical Arts.
Bourne—High School.
Braintree—High School.
Brewster—High School.

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[1] The State board of education accepts for certification to the State normal schools all high schools approved by the New England college entrance certificate board.

Brookfield—High School.
Canton—High School.
Charlemont—High School.
Chatham—High School.
Chelmsford—
  Center High School.
  North High School.
Cohasset—High School.
Douglas—High School.
Dover—High School.
Duxbury—High School.
East Bridgewater—High School.
Easton—High School.
Edgartown—High School.
Essex—High School.
Fall River—Technical High School.
Great Barrington—High School.
Hamilton—High School.
Hardwick—High School.
Holbrook—High School.
Holden—High School.
Hopedale—High School.
Hopkinton—High School.
Huntington—High School.
Lancaster—High School.
Lenox—High School.
Littleton—High School.
Ludlow—High School.
Medfield—High School.
Merrimac—High School.
Millbury—High School.
Millis—High School.
Nantucket—High School.
Northboro—High School.
Northfield—High School.
Oak Bluffs—High School.
Orleans—High School.
Oxford—High School.
Pembroke—High School.
Petersham—High School.
Plainville—High School.
Randolph—High School.
Reading—High School.
Rockport—High School.
Shirley—High School.
Shrewsbury—High School.
Somerset—High School.
Southboro—High School.
South Hadley—High School.
Spencer—High School.
Sterling—High School.
Stockbridge—High School.
Stow—High School.
Sutton—High School.
Templeton—High School.
Tisbury—High School.
Topsfield—High School.
Walpole—High School.
Watertown—High School.
Wayland—High School.
Westboro—High School.
Westford—High School.
West Boylston—High School.
Westminster—High School.
Weston—High School.
Williamsburg—High School.
Wilmington—High School.
Worcester—North High School.
Yarmouth—High School.

MICHIGAN.

Accredited by the University of Michigan, August, 1915.

"Graduates of schools which have been placed by the university on the approved list are admitted without examination on presenting a recommendation, signed by the principal of the school, certifying that they have satisfactorily done all the work required for admission."

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2
Foreign language	2
Science	1
(Two subjects of 3 units each from above.)	
Electives	7

Adrian—High School.
Albion—High School
Allegan—High School.
Alma—High School.
Alpena—High School.
Ann Arbor—
  High School.
  St. Thomas's School.
Armada—High School.
Athens—High School.
Bad Axe—High School.
Bangor—High School.
Baraga—High School.
Battle Creek—High School.
Bay City—
  (East Side)—High School.
  (West Side)—High School.
  Holy Rosary Academy.
Bay City—Continued.
  St. James Academy.
  St. Mary's School.
Beacon—Champion High School.
Belding—High School.
Bellaire—High School.
Bellevue—High School.
Benton Harbor—High School.
Benzonia—*Academy.*
Berrien Springs—High School.
Bessemer—High School.
Big Rapids—
  Ferris Institute.
  High School.
Birmingham—High School.
Blissfield—East Blissfield High School.
Boyne City—High School.
Bronson—High School.

Brooklyn—High School.
Brown City—High School.
Buchanan—High School.
Cadillac—High School.
Calumet—High School.
Caro—High School.
Carson City—High School.
Cass City—High School.
Cassopolis—High School.
Cedar Springs—High School.
Central Lake—High School.
Charlevoix—High School.
Charlotte—High School.
Cheboygan—High School.
Chelsea—High School.
Chesaning—High School.
Clare—High School.
Clinton—High School.
Coldwater—High School.
Coloma—High School.
Colon—High School.
Constantine—High School.
Coopersville—High School.
Corunna—High School.
Croswell—High School.
Crystal Falls—High School.
Decatur—High School.
Deckerville—High School.
Detroit—
  Cass High School.
  Central High School.
  Eastern High School.
  Liggett School.
  McMillan High School.
  Northwestern High School.
  New University School.
  University of Detroit High School.
  Western High School.
Dexter—High School.
Dollar Bay—High School.
Dowagiac—High School.
Dundee—High School.
Durand—High School.
East Jordan—High School.
East Tawas—High School.
Eaton Rapids—High School.
Elk Rapids—High School.
Elsie—High School.
Escanaba—High School.
Evart—High School.
Fenton—High School.
Flint—High School.
Flushing—High School.
Fowlerville—High School.
Frankfort—High School.
Fremont—High School.
Galesburg—High School.
Gaylord—High School.
Gladstone—High School.
Gladwin—High School.
Gobleville—High School.
Grand Haven—
  Akeley Hall.
  High School.
Grand Ledge—High School.
Grand Rapids—
  Academy.
  Catholic High School for Boys.
  Catholic High School for Girls.
  Central High School.
  John Calvin College Preparatory.
  Sacred Heart Academy.
  South Grand Rapids High School.
  Union High School.
Grandville—High School.
Grayling—High School.
Greenland—High School.
Greenville—High School.
Gwinn—High School.
Hancock—High School.
Harbor Beach—High School.
Harbor Springs—High School.
Hart—High School.
Hartford—High School.
Hastings—High School.
Highland Park—High School.
Hillsdale—High School.
Holland—High School.
Holly—High School.
Homer—High School.
Houghton—High School.
Howard City—High School.
Howell—High School.
Hudson—High School.
Imlay City—High School.
Iona—High School.
Iron Mountain—High School.
Iron River—High School.
Ironwood—
  High School.
  St. Ambrose School.
Ishpeming—High School.
Ithaca—High School.
Jackson—
  High School.
  St. Mary's School.
Jonesville—High School.
Kalamazoo—
  High School.
  Nazareth Academy.
  Normal Preparatory.
Kalkaska—High School.
L'Anse—High School.
Lake City—High School.
Lake Linden—High School.
Lake Odessa—High School.
Lansing—
  High School.
  St. Mary's School.
Lapeer—High School.
Lawrence—High School.
Lawton—High School.
Leslie—High School.
Linden—High School.
Lowell—High School.
Ludington—
  High School.
  St. Simon's School.
Mancelona—High School.
Manchester—High School.

Manistee—High School.
Manistique—High School.
Manton—High School.
Marine City—High School.
Marlette—High School.
Marquette—High School.
Marshall—High School.
Mason—High School.
Mendon—High School.
Menominee—High School.
Midland—High School.
Milan—High School.
Milford—High School.
Millington—High School.
Monroe—
    High School.
    St. Mary's Academy.
Montgomery—High School.
Morenci—High School.
Mount Clemens—
    High School.
    St. Peter's School.
Mount Pleasant—
    High School.
    Normal Preparatory.
    Sacred Heart Academy.
Muskegon—
    High School.
    St. Mary's School.
Munising—High School.
Nashville—High School.
Negaunee—High School.
Newaygo—High School.
New Baltimore—High School.
Newberry—High School.
Niles—High School.
North Branch—High School.
Northville—High School.
Norway—High School.
Olivet—High School.
Onaway—High School.
Ontonagon—High School.
Orchard Lake—*Methodius School.*
Orion—High School.
Otsego—High School.
Ovid—High School.
Owosso—High School.
Oxford—High School.
Painesdale—High School.
Paw Paw—High School.
Pellston—High School.
Pentwater—High School.
Petoskey—High School.
Plainwell—High School.
Plymouth—High School.
Pontiac—High School.
Port Huron—High School.
Portland—High School.
Rapid River—High School.
Reading—High School.
Reed City—High School.
Republic—High School.
Richmond—High School.
River Rouge—High School.
Rochester—High School.
Rockford—High School.
Rockland—High School.
Romeo—High School.
Royal Oak—High School.
Saginaw—
    (East Side)—High School.
    St. Mary's School.
    (South Side)—*SS. Peter and Paul's School.*
    (West Side)—High School.
St. Charles—High School.
St. Clair—High School.
St. Ignace—High School.
St. Johns—High School.
St. Joseph—High School.
St. Louis—High School.
Saline—High School.
Sandusky—High School.
Sault Ste. Marie—High School.
Saranac—High School.
Schoolcraft—High School.
Scottville—High School.
Sebewaing—High School.
Shelby—High School.
Shepherd—High School.
South Haven—High School.
Sparta—High School.
Spring Arbor—*Academy.*
Standish—High School.
Stanton—High School.
Sturgis—High School.
Tecumseh—High School.
Tekonsha—High School.
Three Oaks—High School.
Three Rivers—High School.
Traverse City—High School.
Trenton—High School.
Union City—High School.
Vassar—High School.
Vermontville—High School.
Vicksburg—High School.
Vulcan—High School.
Wakefield—High School.
Watervliet—High School.
Wayne—High School.
West Branch—High School.
Whitehall—High School.
White Pigeon—High School.
Williamston—High School.
Wolverine—High School.
Wyandotte—High School.
Yale—High School.
Ypsilanti—
    High School.
    Michigan State Normal College, Preparatory.
Zeeland—High School.

MINNESOTA.

Approved by the Minnesota State Education Department and accredited by the University of Minnesota, for the year 1915-16.[1]

	Units.
Admission requirements	15
Prescribed units:	
English	[2] 3 or 4
Mathematics	2
Electives	9 or 10

- Ada—High School.
- Adrian—High School.
- Aitkin—High School.
- Akeley—High School.
- Albert Lea—
  - *Albert Lea College, Preparatory Department.*
  - High School.
- Alden—High School.
- Alexandria—High School.
- Amboy—High School.
- Annandale—High School.
- Anoka—High School.
- Appleton—High School.
- Argyle—High School.
- Arlington—High School.
- Atwater—High School.
- Aurora—High School.
- Austin—High School.
- Bagley—High School.
- Barnesville—High School.
- Belle Plaine—High School.
- Bemidji—High School.
- Benson—High School.
- Bird Island—High School.
- Biwabik—High School.
- Blackduck—High School.
- Blooming Prairie—High School.
- Blue Earth—High School.
- Brainerd—High School.
- Breckenridge—High School.
- Brown Valley—High School.
- Buffalo—High School.
- Buhl—High School.
- Caledonia—High School.
- Cambridge—High School.
- Canby—High School.
- Cannon Falls—High School.
- Cass Lake—High School.
- Chaska—High School.
- Chatfield—High School.
- Chisholm—High School.
- Clarkfield—High School.
- Cloquet—High School.
- Cokato—High School.
- Coleraine—
  - Greenway High School.
  - Olcott High School.
- Collegeville—*St. John's College.*
- Cottonwood—High School.
- Crookston—High School.
- Dassel—High School.
- Dawson—High School.
- Deer River—High School.
- Delano—High School.
- Detroit—High School.
- Dodge Center—High School.
- Duluth—
  - *Cathedral High School for Boys.*
  - *Cathedral High School for Girls.*
  - Central High School.
  - Denfeld High School.
  - *Villa Sancta Scholastica.*
- Eagle Bend—High School.
- East Grand Forks—High School.
- Elbow Lake—High School.
- Elk River—High School.
- Elmore—High School.
- Ely—High School.
- Eveleth—High School.
- Excelsior—High School.
- Fairfax—High School.
- Fairmont—High School.
- Faribault—
  - High School.
  - *Bethlehem Academy.*
  - *St. Mary's Hall.*
  - *Shattuck Military Academy.*
- Farmington—High School.
- Fergus Falls—
  - High School.
  - *Park Region Luther College.*
- Fertile—High School.
- Fosston—High School.
- Frazee—High School.
- Frontenac—*Villa Maria.*
- Fulda—High School.
- Gaylord—High School.
- Gilbert—High School.
- Glencoe—High School.
- Glenwood—High School.
- Graceville—High School.
- Grand Meadow—High School.
- Grand Rapids—High School.
- Granite Falls—High School.
- Hallock—High School.
- Halstad—High School.
- Harmony—High School.
- Hastings—High School.
- Hawley—High School.
- Hector—High School.
- Henderson—High School.
- Herman—High School.
- Heron Lake—High School.
- Hibbing—High School.
- Hinckley—High School.
- Hopkins—High School.
- Houston—High School.
- Howard Lake—High School.
- Hutchinson—High School.
- International Falls—High School.
- Ivanhoe—High School.
- Jackson—High School.

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[1] The State Education Department approves only public high schools.

[2] If 3, must be accompanied by 4 units of one foreign language, or 2 units in each of two foreign languages.

Janesville—High School.
Jordan—High School.
Kasota—High School.
Kasson—High School.
Kenyon—High School.
Kerkoven—High School.
Lake Benton—High School.
Lake City—High School.
Lake Crystal—High School.
Lakefield—High School.
Lake Park—High School.
Lamberton—High School.
Lanesboro—High School.
Le Roy—High School.
Le Sueur—High School.
Le Sueur Center—High School.
Litchfield—High School.
Little Falls—High School.
Long Prairie—High School.
Luverne—High School.
Lyle—High School.
McIntosh—High School.
Mabel—High School.
Madelia—High School.
Madison—High School.
Mahnomen—High School.
Mankato—High School.
Mantorville—High School.
Maple Lake—High School.
Mapleton—High School.
Marshall—High School.
Melrose—High School.
Milaca—High School.
Minneapolis—
    Blake School for Boys.
    Central High School.
    East High School.
    Graham Hall.
    Minnesota College.
    North High School.
    South High School.
    St. Margaret's Academy.
    Stanley Hall.
    West High School.
Minneota—High School.
Montevideo—
    High School.
    Windom Institute.
Montgomery—High School.
Monticello—High School.
Moorhead—
    Concordia College.
    High School.
Mora—High School.
Morris—High School.
Morton—High School.
Mountain Lake—High School.
New Prague—High School.
New Richland—High School.
New Ulm—High School.
Northfield—High School.
North St. Paul—High School.
Norwood—Young America High School.
Olivia—High School.
Ortonville—High School.
Osakis—High School.
Owatonna—
    High School.
    Pillsbury Academy.
Park Rapids—High School.
Paynesville—High School.
Pelican Rapids—High School.
Perham—High School.
Pine City—High School.
Pine Island—High School.
Pine River—High School.
Pipestone—High School.
Plainview—High School.
Preston—High School.
Princeton—High School.
Red Lake Falls—High School.
Red Wing—
    Academy of the Red Wing Seminary.
    High School.
    Lutheran Ladies' Seminary.
Redwood Falls—High School.
Renville—High School.
Rochester—High School.
Royalton—High School.
Rush City—High School.
Rushford—High School.
St. Charles—High School.
St. Cloud—High School.
St. James—High School.
St. Joseph—*Convent of St. Benedict.*
St. Louis Park—High School.
St. Paul—
    Bethel Academy.
    Central High School.
    John A. Johnson High School.
    Mechanic Arts High School.
    Humboldt High School.
    St. Joseph Academy.
    St. Paul Academy.
    St. Paul Normal School.
    St. Thomas College.
    The Backus School for Girls.
    The College of St. Catherine.
    The Loomis School.
    Visitation Convent.
St. Paul Park—*St. Paul's College.*
St. Peter—High School.
Sandstone—High School.
Sauk Center—High School.
Sauk Rapids—High School.
Shakopee—High School.
Sherburn—High School.
Slayton—High School.
Sleepy Eye—High School.
South St. Paul—High School.
Springfield—High School.
Spring Grove—High School.
Spring Valley—High School.
Staples—High School.
Stephen—High School.
Stewartville—High School.
Stillwater—High School.
Thief River Falls—High School.
Tracy—High School.
Two Harbors—High School.
Tyler—High School.
Villard—High School.

Virginia—High School.
Wabasha—High School.
Wadena—High School.
Walker—High School.
Warren—High School.
Waseca—High School.
Waterville—High School.
Wayzata—High School.
Welcome—High School.
Wells—High School.
West Concord—High School.
Wheaton—High School.
White Bear Lake—High School.
Willmar—High School.
Windom—High School.
Winnebago—High School.
Winona—
  High School.
  St. Clare Seminary.
Winthrop—High School.
Worthington—High School.
Zumbrota—High School.

MISSISSIPPI.

Affiliated with the University of Mississippi for the year 1916-17.

	Units.
Admission requirements	14
Prescribed units:	
English	3
Mathematics	2½
History	2
Electives	6½

Aberdeen—High School.
Ackerman—High School.
Amory—High School.
Ashland—High School.
Baldwyn—High School.
Batesville—High School.
Belzoni—High School.
Benton—Agricultural High School.
Biloxi—High School.
Blue Mountain—*Mississippi Heights Academy.*
Booneville—High School.
Brandon—High School.
Brookhaven—High School.
Brooklyn—Agricultural High School.
Byhalia—High School.
Buena Vista—Agricultural High School.
Camden—Agricultural High School.
Canton—High School.
Centerville—High School.
Charleston—High School.
Clara—Agricultural High School.
Clarksdale—High School.
Cleveland—Agricultural High School.
Collins—High School.
Columbia—High School.
Columbus—High School.
Como—High School.
Corinth—High School.
Courtland—Agricultural High School.
Crystal Springs—High School.
Derma—Agricultural High School.
Durant—High School.
Ecru—High School.
Ellisville—Agricultural High School.
Eupora—High School.
Fayette—County High School.
Flora—High School.
Florence—High School.
Forest—High School.
French Camp—*Academy.*
Goodman—Agricultural High School.
Greenville—
  Academy.
  High School.
Greenwood—High School.
Grenada—High School.
Gulfport—
  Gulfcoast Military Academy.
  High School.
Harperville—Agricultural High School.
Hattiesburg—High School.
Hazlehurst—High School.
Hernando—High School.
Hickory—High School.
Holly Springs—High School.
Houlka—High School.
Houston—High School.
Indianola—High School.
Itta Bena—High School.
Iuka—High School.
Jackson—Central High School.
Kilmichael—Agricultural High School.
Kosciusko—High School.
Kossuth—Agricultural High School.
Lamar—Slayden Agricultural High School.
Laurel—High School.
Leakesville—Agricultural High School.
Lena—Agricultural High School.
Lexington—High School.
Liberty—High School.
Long View—Agricultural High School.
Louin—High School.
Louisville—High School.
Lumberton—High School.
Maben—High School.
Macon—High School.
Madison—High School.
Magnolia—High School.
Marks—High School.
Mashulaville—Agricultural High School.
Mathiston—*Bennett Academy.*
Mendenhall—Agricultural High School.
Meridian—High School.
McComb—High School.
Meadville—Agricultural High School.
Mize—Agricultural High School.
Montrose—*Mississippi Conference Training School.*
Moorhead—Agricultural High School.

Morton—High School.
Moss Point—High School.
Mount Olive—High School.
Natchez—High School
Nettleton—High School.
New Albany—High School.
New Augusta—High School.
Newton—High School.
Oakland—Agricultural High School.
Okolona—High School.
Olive Branch—Agricultural High School.
Oxford—
Agricultural High School.
College Hill.
High School.
Pascagoula—High School.
Pass Christian—High School.
Pelahatchie—High School.
Perkinston—Agricultural High School.
Pheba—Agricultural High School.
Philadelphia—High School.
Pittsboro—High School.
Pontotoc—High School.
Poplarville—Agricultural High School.
Port Gibson—*Chamberlain-Hunt Academy.*
Prentiss—High School.
Purvis—Agricultural High School.
Richton—High School.
Rooling Fork—High School.
Sardis—High School.
Scooba—Agricultural High School.
Senatobia—High School.
Shelby—High School.
Shuqualak—High School.
Starkville—High School.
Summit—High School.
Sumrall—High School.
Toccopola—High School.
Tula—High School.
Tupelo—
High School.
Military Institute.
Tylertown—High School.
Union—High School.
Union Church—Agricultural High School.
Vaiden—High School.
Vancleave—High School.
Verona—High School.
Vicksburg—
All Saints' College.
High School.
St. Aloysius Academy.
Walnut—Chalybeate Agricultural High School
Washington—*Jefferson Military Academy.*
Water Valley—High School.
West Point—
High School.
Southern Christian College.
Wiggins—High School.
Winona—High School.
Woodville—Agricultural High School.
Yazoo City—High School.

MISSOURI.

Approved by the State superintendent of schools and accredited by the University of Missouri, January 1, 1916.[1]

	Units.
University admission requirements	15
Prescribed units:	
English	3
Mathematics	1
Foreign language	2
Electives	9

Adrain—High School.
Albany—High School.
Armstrong—High School.
Ash Grove—High School.
Aurora—High School.
Belton—High School.
Bethany—High School.
Bevier—High School.
Billings—High School.
Bloomfield—High School.
Bolivar—High School.
Bonne Terre—High School.
Boonville—
High School.
Kemper Military School.
Bosworth—High School.
Bowling Green—High School.
Braymer—High School.
Breckenridge—High School.
Brookfield—High School.
Brunswick—High School.
Buffalo—High School.
Bunceton—High School.
Burlington Junction—High School.
Butler—High School.
Cainesville—High School.
California—High School.
Camden Point—*Missouri Christian College.*
Cameron—High School.
Campbell—High School.
Canton—High School.
Cape Girardeau—High School.
Carrollton—High School.
Carthage—High School.
Caruthersville—High School.
Centralia—High School.
Charleston—High School.
Chillicothe—High School.
Clarence—High School.
Clayton—High School.
Clinton—High School.
Columbia—
High School.
University High School.
Dearborn—High School.
Desloge—High School.

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[1] The State superintendent of schools approves only the public high schools.

De Soto—High School.
Dexter—High School.
Doniphan—High School.
East Prairie—High School.
Edina—High School.
Eldon—High School.
Eldorado Springs—High School.
Elsberry—High School.
Eolia—High School.
Everton—High School.
Excelsior Springs—High School.
Fairfax—High School.
Farmington—
- *Carleton College.*
- High School.

Fayette—
- High School.
- *Central College Academy.*

Ferguson—High School.
Festus—High School.
Flat River—High School.
Fredericktown—High School.
Fulton—High School.
Gallatin—High School.
Garden City—High School.
Gilman City—High School.
Glasgow—High School.
Golden City—High School.
Gorin—High School.
Grant City—High School.
Green City—High School.
Greenfield—High School.
Greenville—High School.
Hale—High School.
Hamilton—High School.
Hannibal—High School.
Hardin—High School.
Harrisonville—High School.
Hayti—High School.
Hickman Mills—High School.
Higbee—High School.
Higginsville—High School.
Holden—High School.
Hopkins—High School.
Houston—High School.
Huntsville—High School.
Iberia—*Academy.*
Independence—High School.
Ironton—High School.
Jackson—High School.
Jamesport—High School.
Jasper—High School.
Jefferson City—High School.
Joplin—High School.
Kahoka—High School.
Kansas City—
- Central High School.
- Lincoln High School.
- Manual Training High School.
- Northeast High School.
- *St. Teresa's Academy.*
- Westport High School.

Kennett—High School.
Keytesville—High School.
King City—High School.
Kirksville—High School.
Kirkwood—High School.
Knobnoster—High School.
Knox City—High School.
La Belle—High School.
Laclede—High School.
Lamar—High School.
Lancaster—High School.
La Plata—High School.
Lathrop—High School.
Lebanon—High School.
Lees Summit—High School.
Lexington—
- High School.
- *Wentworth Military Academy.*

Liberty—High School.
Linneus—High School.
Lockwood—High School.
Louisiana—High School.
Macon—High School.
Maitland—High School.
Malden—High School.
Maplewood—High School.
Marceline—High School.
Marionville—High School.
Marshall—High School.
Marshfield—High School.
Maryville—High School.
Maysville—High School.
Meadville—High School.
Memphis—High School.
Mexico—High School.
Milan—High School.
Moberly—High School.
Monett—High School.
Monroe City—High School.
Montgomery City—High School.
Mound City—High School.
Mountain Grove—High School.
Mount Vernon—High School.
Neosho—High School.
Nevada—High School.
New Franklin—High School.
New Haven—High School.
New London—High School.
New Madrid—High School.
Norborne—High School.
Odessa—High School.
Oregon—High School.
Osceola—High School.
Otterville—High School.
Ozark—High School.
Palmyra—High School.
Paris—High School.
Pattonsburg—High School.
Perry—High School.
Perryville—High School.
Peirce City—High School.
Piedmont—High School.
Platte City—High School.
Plattsburg—High School.
Pleasant Hill—High School.
Polo—High School.
Poplar Bluff—High School.
Potosi—High School.
Princeton—High School.
Republic—High School.
Richmond—High School.
Ridgeway—High School.

St. Charles—High School.
Ste. Genevieve—High School.
St. James—High School.
St. Joseph—Central High School.
St. Louis—
  Central High School.
  Manual Training School (Washington University).
  Hosmer Hall.
  Lenox Hall.
  McKinley High School.
  Mary Institute.
  Smith Academy.
  Soldan High School.
  St. Joseph's Academy.
  St. Vincent's Academy.
  Sumner High School.
  The Principia.
  Yeatman High School.
Salem—High School.
Salisbury—High School.
Sarcoxie—High School.
Savannah—High School.
Sedalia—High School.
Seymour—High School.
Shelbina—High School.
Shelbyville—High School.
Sikeston—High School.
Skidmore—High School.
Slater—High School.
Springfield—High School.
Stanberry—High School.
Steelville—High School.
Sturgeon—High School.
Sullivan—High School.
Sweet Springs—High School.
Tarkio—High School.
Tipton—High School.
Trenton—High School.
Troy—High School.
Union—High School.
Unionville—High School.
Vandalia—High School.
Versailles—High School.
Walnut Grove—High School.
Warrensburg—High School.
Warsaw—High School.
Washington—High School.
Webb City—High School.
Webster Groves—High School.
Wellston—High School.
Wellsville—High School.
Weston—High School.
West Plains—High School.
Willow Springs—High School.
Windsor—High School.

MONTANA.

Accredited by the State board of education and the University of Montana, March 9, 1916.

	Units.
University admission requirements	15
The university prescribes no subjects for entrance, but entrance credit is given for all subjects in the official courses of study for Montana high schools. These must maintain one or more four-year courses of study, in all of which the following subjects shall be constant elements for the minimum amounts indicated:	
English	4
Foreign language	2
Mathematics	2
Science	1
History	1

Anaconda—High School.
Baker—High School.
Belgrade—High School.
Belt—High School.
Big Timber—Sweet Grass County High School.
Billings—High School.
Boulder—Jefferson County High School.
Bozeman—Gallatin County High School.
Bridger—High School.
Butte—
  Business College.
  Central High School.
  High School.
Chinook—High School.
Choteau—Teton County High School.
Columbia Falls—High School.
Columbus—High School.
Conrad—High School.
Corvallis—High School.
Culbertson—High School.
Cutbank—High School.
Deer Lodge—
  Academy of the College of Montana.
  Powell County High School.
Dillon—Beaverhead County High School.
Eureka—High School.
Forsyth—High School.
Fort Benton—Choteau County High School.
Fromberg—High School.
Glasgow—High School.
Glendive—Dawson County High School.
Great Falls—
  High School.
  Mount Angela Ursuline Academy.
Hamilton—High School.
Harlowton—High School.
Havre—High School.
Helena—
  High School.
  St. Vincent's Academy.
Hysham—High School.
Joliet—High School.
Kalispell—Flathead County High School.
Laurel—High School.
Lewistown—Fergus County High School.
Libby—High School.
Livingston—Park County High School.
Manhattan—High School.

Miles City—Custer County High School.
Missoula—
  Missoula County High School.
  Loyola High School.
  Sacred Heart Academy.
Moore—High School.
Philipsburg—Granite County High School.
Plains—High School.
Polson—High School.
Pony—High School.
Ravalli—High School.
Red Lodge—Carbon County High School.
Roundup—High School.
Shelby—High School.
Sheridan—High School.
Sidney—High School.
Stanford—High School.
Stevensville—High School.
Terry—High School.
Thompson Falls—High school.
Three Forks—High School.
Townsend—Broadwater County High School.
Valier—High School.
Victor—High School.
Virginia City—High School.
Whitefish—High School.
Whitehall—High School.
White Sulphur Springs—High School.
Wibaux—Wibaux County High School.
Worden—High School.

NEBRASKA.

Accredited by the University of Nebraska for the year 1914-15.

	Units.
Admission requirements	15
Prescribed units—	
English	2
Mathematics	2
Foreign language	3
Science	1
History	1
Electives	6

GROUP A.

Adams—High School.
Albion—High School.
Alliance—High School.
Ashland—High School.
Auburn—High School.
Aurora—High School.
Beatrice—High School.
Beaver Crossing—High School.
Bellevue—Pioneer Union High School.
Benson—High School.
Bethany—*Cotner Academy.*
Blair—
  Dana College Academy.
  High School.
Broken Bow—High School.
Burwell—High School.
Central City—High School.
Clarks—High School.
College View—*Union College Academy.*
Columbus—High School.
Crete—
  Doane Academy.
  High School.
Curtis—Nebraska School of Agriculture.
David City—High School.
Edgar—High School.
Emerson—High School.
Exeter—High School.
Fairbury—High School.
Fairfield—High School.
Fairmont—High School.
Falls City—High School.
Franklin—
  Academy.
  High School.
Fremont—High School.
Friend—High School.
Fullerton—High School.
Geneva—High School.
Genoa—High School.
Gothenburg—High School.
Grand Island—
  Academy.
  High School.
Harvard—High School.
Hastings—
  Academy.
  High School.
Havelock—High School.
Hebron—High School.
Holdrege—High School.
Humboldt—High School.
Kearney—High School.
Kimball—High School (County).
Lexington—High School.
Lincoln—
  High School.
  Nebraska Military Academy.
  School of Agriculture, University of Nebraska.
  Teachers' College High School, University of Nebraska.
McCook—High School.
Madison—High School.
Mead—High School.
Minden—High School.
Nebraska City—High School.
Neligh—High School.
Nelson—High School.
Newman Grove—High School.
Norfolk—High School.
North Platte—High School.
Ohiowa—High School.
Omaha—
  Brownell Hall.
  Creighton Academy.
  High School.
  Mount St. Mary's Seminary.
  Sacred Heart Academy.

Ord—High School.
Osceola—High School.
Pawnee City—High School.
Pender—High School.
Plainview—High School.
Ponca—High School.
Randolph—High School.
Ravenna—High School.
Red Cloud—High School.
St. Edward—High School.
Schuyler—High School.
Scottsbluff—High School.
Seward—High School.
Shelton—High School.
Sidney—High School.
South Omaha—High School.
Stanton—High School.
Stromsburg—High School.
Superior—High School.
Sutton—High School.
Syracuse—High School.
Tecumseh—High School.
Tekamah—High School.
University Place—
  High School.
  Nebraska Wesleyan Academy.
Wahoo—High School.
Wayne—High School.
Weeping Water—High School.
West Point—High School.
Wilber—High School.
Wisner—High School.
York—
  College Academy.
  High School.

GROUP B.[1]

Ainsworth—High School.
Alexandria—High School.
Alma—High School.
Ansley—High School.
Arapahoe—High School.
Arlington—High School.
Atkinson—High School.
Bancroft—High School.
Bartley—High School.
Battle Creek—High School.
Beaver City—High School.
Benkleman—High School.
Bertrand—High School.
Bethany—High School.
Bladen—High School.
Bloomfield—High School.
Bloomington—High School.
Blue Hill—High School.
Blue Springs—High School.
Brady—High School.
Bridgeport—High School.
Butte—High School.
Cambridge—High School.
Campbell—High School.
Cedar Bluffs—High School.
Cedar Rapids—High School.
Central City—*Nebraska Central College Academy.*
Chadron—High School.
Chester—High School.
Clarkson—High School.
Clay Center—High School.[1]
Coleridge—High School.
Cook—High School.
Cozad—High School.
Craig—High School.
Crawford—High School.
Creighton—High School.
Crofton—High School.
Culbertson—High School.
Davenport—High School.
De Witt—High School.
Diller—High School.
Dodge—High School.
Dorchester—High School.
Edison—High School.
Elgin—High School.
Elmcreek—High School.
Elmwood—High School.
Eustis—High School.
Ewing—High School.
Gering—Union High School.
Gibbon—High School.
Giltner—High School.
Gordon—High School.
Grafton—High School.
Grant—Perkins County High School.
Greeley—High School.
Greenwood—High School.
Gretna—High School.
Guide Rock—High School.
Hardy—High School.
Hartington—High School.
Hastings—*Immaculate Conception Academy.*
Hebron—*Academy.*
Hickman—High School.
Hildreth—High School.
Holbrook—High School.
Hooper—High School.
Indianola—High School.
Jackson—
  High School.
  St. Catherine Academy.
Juniata—High School.
Kenesaw—High School.
Laurel—High School.
Lawrence—High School.
Liberty—High School.
Lincoln—*St. Theresa's High School.*
Lodge Pole—High School.
Louisville—High School.
Loup City—High School.
Lyons—High School.
Maxwell—High School.
Meadow Grove—High School.
Merna—High School.
Milford—High School.
Mitchell—High School.
Morrill—High School.
Nebraska City—*St. Bernard Academy.*
Nehawka—High School.
Newcastle—High School.
North Bend—High School.

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[1] Schools fully accredited but not meeting fully the standards of Group A schools as to the preparation of teachers or in laboratory and library facilities.

North Loup—High School.
Oakdale—High School.
Oakland—High School.
Odell—High School.
Ogallala—High School.
Omaha—*Sacred Heart High School.*
O'Neill—
  High School.
  St. Mary's Academy.
Orchard—High School.
Orleans—High School.
Overton—High School.
Oxford—High School.
Papillion—High School.
Pierce—High School.
Plattsmouth—High School.
Polk—High School.
Rising Sun—High School.
St. Paul—High School.
Sargent—High School.
Scribner—High School.
Shelby—High School.
Silver Creek—High School.
Spalding—*Academy.*
Spencer—High School.
Springfield—High School.
Stella—High School.
Sterling—High School.
Stratton—High School.
Stuart—High School.
Sutherland—High School.
Swanton—High School.
Table Rock—High School.
Tilden—High School.
Trenton—High School.
Ulysses—High School.
Utica—High School.
Valentine—High School.
Valley—High School.
Wahoo—*Luther Academy.*
Wakefield—High School.
Waterloo—High School.
Western—High School.
Wilsonville—High School.
Wood River—High School.
Wymore—High School.
York—*Holy Family Academy.*

GROUP C.[1]

Carroll—High School.
Columbus—*St Francis Academy.*
Cortland—High School.
Cowles—High School.
Falls City—*Sacred Heart Academy.*
Haigler—High School.
Herman—High School.
Humphrey—High School.
Hyannis—High School.
Kearney—*Military Academy.*
Lynch—High School.
Monroe—High School.
Osmond—High School.
Rushville—High School.
Talmage—High School.
Thedford—Thomas County High School.
Union—High School.
Wausa—High School.
Winside—High School.
Wolbach—High School.

NEVADA.

Fully accredited by the University of Nevada, November, 1915.

"Graduates of such accredited high schools may, on the recommendation of their teacher, be admitted to the university in the subjects in which their school has been accredited, but in all other subjects an examination will be required."

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2
History	2
Science	1
Foreign language	4
Electives	3

Bunkerville—High School.
Carson City—High School.
Dayton—Lyon County High School.
Elko—Elko County High School.
Ely—White Pine County High School.
Fallon—Churchill County High School.
Gardnerville—Douglas County High School.
Goldfield—High School.
Las Vegas—Clark County High School.
Lovelock—Humboldt County High School.
Panaca—Lincoln County High School.
Reno—High School.
Sparks—High School.
Tonapah—High School.
Virginia City—High School.
Winnemucca—Humboldt County High School.
Yerington—Lyon County High School.

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[1] The graduates of this group may receive 28 points (14 units) on credentials from their schools, giving them conditional admission to college or university. Additional credits may be secured by examination.

NEW HAMPSHIRE.

"First-class" schools, approved by the New Hampshire Department of Public Instruction, for the year ending July 15,1916. These schools have four-year courses, and graduation is on at least 14 units.

Alton—High School.
Amherst—High School.
Andover—*Proctor Academy.*
Antrim—High School.
Ashland—High School.
Atkinson—*Academy.*
Bath—High School.
Berlin—High School.
Bethlehem—High School.
Claremont—Stevens High School.
Colebrook—Academy.
Concord—
    High School.
    St. Mary's School.
Contoocook—Hopkinton High School.
Derry—*Pinkerton Academy.*
Dover—High School.
East Jaffrey—Conant High School.
Enfield—High School.
Epping—High School.
Exeter—
    Robinson Seminary.
    Tuck High School.
Farmington—High School.
Franconia—Dow Academy.
Franklin—High School.
Gorham—High School.
Groveton—High School.
Hampstead—High School.
Hampton—Academy.
Hanover—High School.
Haverhill—Academy.
Henniker—High School.
Hillsborough—High School.
Hinsdale—High School.
Hollis—High School.
Hooksett—*Mount St. Mary's Seminary.*
Jefferson—High School.
Keene—High School.
Kingston—*Sanborn Seminary.*
Laconia—High School.
Lancaster—High School.
Lebanon—
    High School.
    (West)—High School.
Lincoln—High School.
Lisbon—High School.
Littleton—High School.
Manchester—
    High School.
    St. Anselm's College.
Meriden—*Kimball Union Academy.*
Milford—High School.
Milton—Nute High School.
Nashua—High School.
New Hampton—*Literary Institution.*
New Ipswich—*Appleton Academy.*
New London—*Colby Academy.*
Newmarket—High School.
Newport—High School.
Northwood Centre—*Coes Academy.*
Pembroke—Academy.
Penacook—High School.
Peterborough—High School.
Pittsfield—High School.
Plymouth—High School.
Portsmouth—High School.
Reeds Ferry—McGaw Institute.
Rochester—High School.
Somersworth—High School.
Strafford Center—*Austin-Cate Academy.*
Stratford (North)—High School.
Sunapee—High School.
Tilton—*Seminary.*
Walpole—High School.
Warner—Simonds Free High School.
Whitefield—High School.
Wilton—High School.
Winchester—High School.
Woodsville—High School.

NEW JERSEY.

Approved by the New Jersey State Board of Education, December, 1915.

"Approved high schools" must maintain curricula covering four full years of work approved by the State board of education; the school year must run at least 38 weeks; the recitation periods must average 40 minutes in length; the teaching force must consist of not less than three teachers; the building must be adequate, and must be provided with ample laboratory and library facilities.

Asbury Park—High School.
Atlantic City—High School.
Atlantic Highlands—High School.
Barnegat—High School.
Bayonne—High School.
Belleville—High School.
Belvidere—High School.
Bernardsville—Bernards High School (Township).
Blairstown—
    Blair Hall.
    High School.
Bloomfield—
    German Theological School.
    High School.
Boonton—High School.
Bordentown—
    Bordentown Military Institute.
    High School.
Bound Brook—High School.
Bridgeton—
    High School.
    Ivy Hall.

Burlington—High School.
Butler—High School.
Caldwell—
  High School.
  Mount St. Dominic Academy.
Camden—High School.
Cape May City—High School.
Cape May Court House—High School.
Chatham—High School.
Clayton—High School.
Clifton—High School (Township).
Clinton—High School.
Closter—High School.
Collingswood—High School.
Convent—
  St. Elizabeth's College, School of Pedagogy.
  St. Elizabeth's Academy.
Cranford—High School.
Dover—High School.
Dumont—High School.
East Orange—High School.
Elizabeth—
  High School.
  Pingry School.
  St. Patrick's High School.
  Vail-Deane School.
Elmer—High School.
Englewood—High School.
Essex Fells—*Kingsley School for Boys.*
Flemington—High School.
Fort Lee—*Holy Angels Academy.*
Freehold—
  High School.
  New Jersey Military Academy.
Glassboro—High School.
Glen Ridge—High School.
Gloucester City—High School.
Hackensack—High School (Township).
Hackettstown—
  Centenary Collegiate Institute.
  High School.
Haddonfield—High School.
Haddon Heights—High School.
Hamburg—High School (Township).
Hammonton—High School.
Hampton—High School.
Harrison—High School.
Hasbrouck Heights—High School.
High Bridge—High School.
Hightstown—
  High School.
  Peddie Institute.
Hoboken—
  High School.
  Sacred Heart Academy.
  Stevens Preparatory School.
Hopewell—High School.
Irvington—High School.
Jamesburg—High School.
Jersey City—
  Dickinson High School.
  Lincoln High School.
  St. Aloysius Academy.
  St. Dominic's Academy.
  St. Peter's High School.
Kearney—High School.
Kenilworth—*Upsala College.*
Keyport—High School.
Lakewood—
  High School.
  Lakewood School.
Lambertville—High School.
Lawrenceville—*Lawrenceville School.*
Leonardo—High School (Township).
Leonia—High School.
Lindon—High School.
Long Branch—
  High School.
  Star of the Sea Academy.
Madison—High School.
Manasquan—High School.
Matawan—High School.
Metuchen—High School.
Millburn—High School (Township).
Millville—High School.
Montclair—
  Academy.
  High School.
Moorestown—
  Friend's Academy.
  High School.
Morristown—
  High School.
  Morris Academy.
  Morristown School.
Mount Holly—High School (Township).
Netcong—High School.
Newark—
  Academy.
  Barringer High School.
  Central High School.
  East Side High School.
  South Side High School.
  St. Benedict's College, Academic Department.
  St. Mary's Academy.
  St. Vincent's Academy.
New Brunswick—
  High School.
  Rutgers Preparatory School.
  St. Peter's School.
Newton—High School.
Nutley—High School.
Ocean City—High School.
Ocean Grove—High School (Township).
Orange—
  Miss Beard's School for Girls.
  Cartaret Academy.
  Dearborn-Morgan School.
  High School.
Palmyra—High School.
Park Ridge—High School.
Passaic—High School.
Paterson—
  High School.
  Hoover School.
Paulsboro—High School
Pemberton—High School.
Pennington—*Seminary.*
Penns Grove—High School.
Perth Amboy—High School.
Phillipsburg—High School.

- Plainfield—
    - *College of Mount St. Mary, Academic Department.*
    - High School.
    - *Leal School for Boys.*
    - North Plainfield High School.
- Point Pleasant—High School.
- Princeton—
    - High School.
    - *Preparatory School.*
- Rahway—High School.
- Ramsey—High School.
- Red Bank—High School.
- Ridgefield Park—High School.
- Ridgewood—High School.
- Rockaway—High School.
- Roselle—High School.
- Roselle Park—High School.
- Rutherford—High School.
- Salem—High School.
- Shiloh—High School (Township).
- Somerville—High School.
- South Amboy—High School.
- South Orange—
    - High School.
    - *Seton Hall College, Academic Department.*
- South River—High School.
- Succasunna—High School (Township).
- Summit—
    - *Carlton Academy.*
    - High School.
    - *Kent Place School for Girls.*
- Sussex—High School.
- Toms River—High School (Township).
- Town of Union—High School.
- Trenton—
    - High School.
    - *Sacred Heart Academy.*
    - *St. Mary's High School.*
    - State Model High School.
- Tuckahoe—High School (Township).
- Tuckerton—High School.
- Verona—High School.
- Vineland—High School (Township).
- Washington—High School.
- Wenonah—*Military Academy.*
- Westfield—High School.
- West Hoboken—
    - High School.
    - *St. Michael's Monastery.*
- West Orange—High School.
- Westwood—High School.
- Wildwood—High School.
- Woodbine—High School.
- Woodbridge—High School.
- Woodbury—High School.
- Woodstown—High School.

NEW MEXICO.

Tentative list of public high schools accredited by the University of New Mexico for the year 1915-16.

The university has as yet made no formal list of accredited schools, but states that the work of the following schools is accepted in whole or in part fulfillment of the university admission requirements.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2½
Language	2
Laboratory science	1
History	1
Electives	5½

- Alamogordo—High School.
- Albuquerque—
    - High School.
    - University of New Mexico, Preparatory Department.
- Artesia—High School.
- Aztec—High School.
- Carlsbad—High School.
- Carrizozo—High School.
- Clayton—High School.
- Clovis—High School.
- Deming—High School.
- Farmington—High School.
- East Las Vegas—Las Vegas High School.
- Portales—High School.
- Raton—High School.
- Roswell—High School.
- Santa Fe—High School.
- Santa Rosa—High School.
- Tucumcari—High School.

Approved by the State Board of Education of New Mexico as offering not less than 14 units of college preparatory work.

- Alamogordo—High School.
- Artesia—High School.
- Belen—High School.
- Capitan—High School.
- Carlsbad—High School.
- Clayton—High School.
- Clovis—High School.
- Deming—High School.
- East Las Vegas—Las Vegas High School.
- Gallup—High School.
- Las Cruces—High School.
- Raton—High School.
- Roswell—High School.
- Santa Fe—High School.
- Santa Rosa—High School.
- Tucumcari—High School.

NEW YORK.

Approved by the Department of Education of New York, October, 1915.

"In order to be approved, a secondary course must include at least 38 weeks a year, 18 periods a week, 45 minutes a period, with satisfactory standing."

- Adams—High School.
- Addison—High School.
- Afton—High School.
- Akron—High School.
- Albany—
  - *Academy of the Holy Names.*
  - *Albany Academy.*
  - *Albany Academy for Girls.*
  - *Cathedral Academy.*
  - *Christian Brothers Academy.*
  - *Female Academy of Sacred Heart.*
  - High School.
  - Milne High School (Department of New York State College for Teachers).
  - *St. Agnes School.*
  - *St. Ann's Academy.*
  - *St. John's Academy.*
  - *St. Joseph's Academy.*
- Albion—High School.
- Alden—High School.
- Alexander—High School.
- Alexandria Bay—High School.
- Alfred—Union School.
- Allegany—
  - High School.
  - *St. Bonaventure's College.*
  - *St. Elizabeth's Academy.*
- Almond—High School.
- Altamont—High School.
- Amenia—High School.
- Amityville—
  - High School.
  - *Queen of the Rosary Academy.*
- Amsterdam—
  - High School.
  - *St. Mary's Catholic Institute.*
- Andes—Hilton Memorial High School.
- Andover—High School.
- Angelica—Wilsonian High School.
- Angola—High School.
- Antwerp—High School.
- Arcade—High School.
- Argyle—High School.
- Attica—High School.
- Auburn—High School.
- Aurora—*Cayuga Lake Academy.*
- Ausable Forks—High School.
- Avoca—High School.
- Avon—High School.
- Babylon—High School.
- Bainbridge—High School.
- Baldwin—High School.
- Baldwinsville—Free Academy.
- Ballston Spa—High School.
- Barker—High School.
- Batavia—High School.
- Bath—Haverling High School.
- Bay Shore—High School.
- Beacon—
  - Fishkill-on-Hudson High School.
  - Matteawan High School.
- Belfast—High School.
- Belleville—
  - High School.
  - *Union Academy of Belleville.*
- Belmont—High School.
- Bergen—High School.
- Berlin—High School.
- Binghamton—High School.
- Black River—High School.
- Blasdell—High School.
- Bolivar—High School.
- Boonville—High School.
- Brasher Falls—Brasher and Stockholm High School.
- Brentwood—*Academy of St. Joseph.*
- Brewster—High School.
- Bridgehampton—High School.
- Brocton—High School.
- Brookfield—High School.
- Brooklyn—
  - *Adelphia Academy.*
  - Bay Ridge High School.
  - *Berkeley Institute for Young Ladies.*
  - Boys' High School.
  - *Brooklyn College, High School Department.*
  - Bushwick High School.
  - Commercial High School.
  - Eastern District High School.
  - Erasmus Hall High School.
  - Girls' High School.
  - Manual Training High School.
  - *Packer Collegiate Institute.*
  - *Polytechnic Institute of Brooklyn, Preparatory School.*
  - *St. Agnes Female Seminary.*
  - *St. Angela's Hall Academy.*
  - *St. Francis Academy.*
  - *St. Francis Xavier's Academy.*
  - *St. James Academy of Brooklyn.*
  - *St. John's Academy of Brooklyn.*
- Brownville—Brownville-Glen Park High School.
- Brushton—High School.
- Buffalo—
  - *Academy of Sacred Heart.*
  - *Buffalo Seminary.*
  - *Canisius College, Academic Department.*
  - Central High School.
  - *Holy Angels Academy.*
  - *Holy Angels Collegiate Institute.*
  - Hutchinson—Central High School.
  - *Institute of Sisters of St. Joseph.*
  - Lafayette High School.
  - *Mary Immaculate Academy.*
  - Masten Park High School.
  - *Mount Mercy Academy.*
  - *Nichols School of Buffalo.*
  - *St. Joseph's Collegiate Institute.*
  - *St. Mary's Academy and Industrial Female School.*
  - South Park High School.
  - Technical High School.
- Caledonia—High School.

Cambridge—High School.
Camden—High School.
Camillus—High School.
Canajoharie—High School.
Canandaigua—Academy.
Canaseraga—High School.
Canastota—High School.
Candor—High School.
Canisteo—High School.
Canton—High School.
Cape Vincent—High School.
Carmel—
  Drew Seminary for Young Women.
  High School.
Carthage—
  Augustinian Academy.
  High School.
  West Carthage High School.
Castile—High School.
Cato—High School.
Catskill—
  Free Academy.
  St. Patrick's Academy.
Cattaraugus—High School.
Cazenovia—
  Cazenovia Seminary.
  Union School.
Center Moriches—High School.
Central Square—High School.
Champlain—High School.
Charlotte—High School.
Chateaugay—High School.
Chatham—High School.
Chaumont—High School.
Chautauqua—High School.
Cherry Creek—High School.
Cherry Valley—High School.
Chester—High School.
Chittenango—Yates High School.
Churchville—High School.
Clarence—Parker High School.
Clayton—High School.
Clayville—High School.
Clifton Springs—High School.
Clinton—High School.
Clyde—High School.
Clymer—High School.
Cobleskill—High School.
Coeymans—High School.
Cohocton—High School.
Cohoes—
  Egberts High School.
  St. Bernard's Academy.
Cold Spring—Haldane High School.
Collins Center—High School.
Congers—High School.
Cooperstown—High School.
Copenhagen—High School.
Corfu—High School.
Corinth—High School.
Corning—
  Corning Free Academy.
  Northside High School.
Cornwall—High School.
Cornwall-on-Hudson—
  High School.
  New York Military Academy.
  The Stone School.
Cortland—High School.
Coxsackie—High School.
Cuba—High School.
Dansville—High School.
Delevan—High School.
Delhi—Delaware Academy and Union School.
Depew—High School.
Deposit—High School.
DeRuyter—High School.
Dexter—High School.
Dobbs Ferry—
  High School.
  Misses Masters School.
Dolgeville—High School.
Dover Plains—High School.
Downsville—High School.
Dryden—High School.
Dundee—High School.
Dunkirk—
  High School.
  St. Mary's Academy.
Earlville—High School.
East Aurora—High School.
East Bloomfield—High School.
East Hampton—High School.
East Pembroke—High School.
East Rochester—High School.
East Syracuse—High School.
Edmeston—High School.
Edwards—High School.
Elba—High School.
Elbridge—High School and Academy.
Elizabethtown—High School.
Ellenville—High School.
Ellicottville—High School.
Ellington—High School.
Elmhurst—Newtown High School.
Elmira—Free Academy.
Elmira Heights—High School.
Endicott—Union-Endicott High School.
Essex—High School.
Evans Mills—High School.
Fabius—High School.
Fair Haven—High School.
Fairport—High School.
Falconer—High School.
Far Rockaway—High School.
Fayetteville—High School.
Fillmore—High School.
Florida—S. S. Seward Institute.
Flushing—High School.
Fonda—High School.
Fordham—*St. John's College High School, Fordham University.*
Forestville—Free Academy.
Fort Ann—High School.
Fort Covington—High School.
Fort Edward—High School.
Fort Plain—High School.
Frankfort—High School.
Franklin—Delaware Literary Institute and Union School.
Franklinville—Ten Broeck Free Academy.
Freeport—High School.
Freeville—
  High School.
  Hunt Memorial School.
Frewsburg—High School.

Friendship—High School.
Fulton—High School.
Fultonville—High School.
Gainesville—High School.
Garden City—
    Cathedral School of St. Mary.
    St. Paul's School.
Gardenville—High School.
Geneva—
    High School.
    St. Francis de Sales School.
Georgetown—High School.
Gilbertsville—High School.
Glen Cove—High School.
Glens Falls—
    Academy.
    High School.
    St. Mary's Academy.
Gloversville—High School.
Goshen—High School.
Gouverneur—High School.
Gowanda—High School.
Granville—High School.
Great Neck—High School.
Greene—High School.
Greenport—High School.
Greenwich—High School.
Griegsville—High School.
Griffin Corners—Griffin-Fleischmann's High School.
Groton—High School.
Hamburg—High School.
Hamilton—High School.
Hammondsport—High School.
Hancock—High School.
Hannibal—High School.
Hardwick—*Hardwick Seminary, Academic Department.*
Harrison—
    Heathcote School.
    High School.
Harrisville—High School.
Hastings upon Hudson—Hastings-on-Hudson High School.
Haverstraw—High School.
Hempstead—High School.
Herkimer—High School.
Hermon—High School.
Hicksville—High School.
Highland—High School.
Highland Falls—
    High School.
    Lady Cliff Academy.
Hillsdale—High School.
Hilton—High School.
Hobart—High School.
Holland Patent—High School.
Holley—High School.
Homer—Academy and Union School.
Honeoye—High School.
Honeoye Falls—High School.
Hoosick Falls—
    High School.
    St. Mary's Academy.
Hornell—High School.
Horseheads—High School.
Houghton—*Houghton Wesleyan Methodist Seminary.*
Hudson—High School.
Hudson Falls—High School.
Hunter—High School.
Huntington—High School.
Ilion—High School.
Indian Lake—Indian Lake School.
Interlaken—High School.
Irvington—High School.
Islip—High School.
Ithaca—
    Cascadilla School Association.
    High School.
    The Sturgis School.
Jamaica—High School.
Jamestown—High School.
Jamesville—High School.
Jefferson—High School.
Johnstown—High School.
Jordan—Free Academy.
Katonah—High School.
Keeseville—High School.
Kenmore—High School.
Keuka Park—*Keuka Institute.*
Kingston—
    Kingston Free Academy.
    Ulster Free Academy.
Lackawanna—High School.
Lake George—High School.
Lakemont—*Palmer Institute, Starkey Seminary.*
Lake Placid—High School.
Lakewood—High School.
Lancaster—
    High School.
    St. Mary's High School.
Lansingburg—High School.
Lawrence—High School.
Leonardsville—High School.
Le Roy—High School.
Lestershire—High School.
Liberty—High School.
Lima—*Genesee Wesleyan Seminary.*
Limestone—High School.
Little Falls—
    High School.
    St. Mary's Academy.
Little Valley—High School.
Liverpool—High School.
Livingston Manor—High School.
Livonia—High School.
Lockport—
    High School.
    St. Joseph's Academy and Industrial Female School.
Locust Valley—*Friends Academy.*
Long Island City—Bryant High School.
Lowville—Academy and Union School.
Luzerne—Hadley Luzerne High School.
Lynbrook—High School.
Lyndonville—High School.
Lyons—High School.
Lyons Falls—High School
Macedon—High School.
McGraw—McGrawville High School.
Machias—High School.
Madrid—High School.
Malone—
    Franklin Academy.
    St. Joseph's Academy of Malone.

- Mamaroneck—
  - High School.
  - Rye Neck High School.
- Manchester—High School.
- Manlius—
  - High School.
  - *St. John's Military School.*
- Marathon—High School.
- Marcellus—High School.
- Margaretville—High School.
- Marion—High School.
- Massena—High School.
- Mayville—High School.
- Mechanicsville—High School.
- Medina—High School.
- Mexico—Academy and High School.
- Middleburg—High School.
- Middleport—High School.
- Middletown—High School.
- Middleville—High School.
- Milford—High School.
- Millbrook—Memorial School.
- Millerton—High School.
- Mineville—High School.
- Minoa—High School.
- Mohawk—High School.
- Moira—High School.
- Monroe—
  - High School.
  - *The Mackenzie School.*
- Montgomery—High School.
- Monticello—High School.
- Montour Falls—
  - *Cook Academy.*
  - Union School.
- Mooers—High School.
- Moravia—High School.
- Moriah—*Sherman Collegiate Institute.*
- Morris—High School.
- Morrisville—High School.
- Mount Hope—*St. Clare's School.*
- Mount Kisco—High School.
- Mount Morris—High School.
- Mount Vernon—High School.
- Naples—High School.
- Newark—High School.
- Newark Valley—High School.
- New Berlin—High School.
- New Brighton—
  - Curtis High School.
  - *Staten Island Academy.*
- Newburgh—Free Academy.
- Newfield—High School.
- New Hartford—High School.
- Newport—High School.
- New Rochelle—
  - High School.
  - *Ursuline Seminary.*
- New Woodstock—High School.
- New York—
  - *Academy of Mount St. Ursula.*
  - *All Hallows Institute.*
  - *All Saints Academy.*
  - *Barnard School for Boys.*
  - *Barnard School for Girls.*
  - *Berkeley School.*
  - *Cathedral High School.*
- New York—Continued.
  - *Charlton School.*
  - *College of Mount St. Vincent, Academic Department.*
  - *Columbia Grammar School.*
  - *(The) Cutler School.*
  - De Witt Clinton High School.
  - *De La Salle Institute.*
  - *Dominican Academy.*
  - *Ethical Culture School.*
  - Evander Childs High School.
  - *Female Academy of Sacred Heart.*
  - *Friends' Seminary.*
  - *Hamilton Institute for Boys.*
  - *Hamilton Institute for Girls.*
  - High School of Commerce.
  - *Holy Cross Academy of Manhattan.*
  - *Horace Mann School (Teachers College).*
  - Hunter College, High School Department.
  - *Irving School.*
  - Julia Richman High School.
  - *La Salle Academy.*
  - *Manhattan College, Academic Department.*
  - Morris High School.
  - *New York Collegiate Institute.*
  - *Regis High School.*
  - *St. Ann's Academy.*
  - *St. Catharine's Academic School of New York.*
  - *St. Gabriel's Academy of Manhattan.*
  - *St. Lawrence's Academy of Manhattan.*
  - *St. Walburga's Academy.*
  - *Scudder School for Girls.*
  - Stuyvesant High School.
  - Townsend Harris Hall (Preparatory Department of the College of the City of New York.
  - *Trinity School.*
  - *Ursuline Academy.*
  - Wadleigh High School.
  - Washington Irving High School.
  - *Xavier High School, College of St. Francis Xavier.*
- Niagara Falls—
  - *De Veaux School.*
  - High School.
- Niagara University—*Niagara University, Academic Department.*
- Nichols—High School.
- Norfolk—High School.
- North Chili—*A. M. Chesbrough Seminary.*
- North Cohocton—North Cohocton and Atlanta Union High School.
- North Collins—High School.
- North Creek—High School.
- Northport—High School.
- North Tarrytown—High School.
- North Tonawanda—High School
- Northville—High School.
- Norwich—High School.
- Norwood—High School.
- Nunda—High School.
- Nyack—
  - High School.
  - *Wilson Memorial Academy.*
- Oakfield—High School.
- Ocean Side—High School.
- Ogdensburg—*St. Mary's Academy.*
- Olean—High School.
- Oneida—High School.

Oneonta—High School.
Onondaga Valley—Onondaga Free Academy.
Ontario—High School.
Orchard Park—High School.
Oriskany Falls—High School.
Ossining—
  High School.
  Mount Pleasant Academy.
  (The) Ossining School.
Oswego—
  High School.
  St. Paul's Academy.
Otego—High School.
Ovid—High School.
Owego—Free Academy.
Oxford—Academy and Union School.
Oyster Bay—High School.
Painted Post—High School.
Palmyra—Classical High School.
Parish—High School.
Parkers—High School.
Patchogue—High School.
Pawling—
  High School.
  Pawling School.
Pearl River—High School.
Peekskill—
  Drum Hill High School.
  Military Academy.
  Oakside High School.
  Westchester Military Academy.
Pelham Manor—Pelham High School.
Penn Yan—Academy.
Perry—High School.
Phelps—Union and Classical School.
Philadelphia—High School.
Philmont—High School.
Phoenix—High School.
Piermont—Tappan Zee High School.
Pike—Seminary High School.
Pine Plains—Seymour Smith Academy.
Pittsford—High School.
Plattsburg—
  D' Youville Academy.
  High School.
Pleasantville—
  Hebrew Sheltering Guardian Society High School.
  High School.
Poland—High School.
Port Byron—High School.
Port Chester—High School.
Port Henry—
  Champlain Academy.
  High School.
Port Jefferson—High School.
Port Jervis—High School.
Port Leyden—High School.
Portville—High School.
Port Washington—High School.
Potsdam—High School.
Poughkeepsie—High School.
Prattsburg—Franklin Academy and Prattsburg High School.
Pulaski—Academy and Union School.
Randolph—
  Chamberlain Military Institute.
  High School.
Ravena—High School.
Red Creek—High School.
Red Hook—High School.
Remsen—High School.
Rensselaer—
  High School.
  St. John's Academy.
Rheinebeck—High School.
Richfield Springs—High School.
Richmond Hill—High School.
Richmondville—High School.
Ripley—High School.
Riverhead—High School.
Rochester—
  Catholic High School.
  Female Academy of Sacred Heart.
  High School, East.
  High School, West.
  Nazareth Academy.
  Wagner Memorial Lutheran College.
Rockville Center—South Side High School.
Rome—
  Academy of the Holy Names.
  Free Academy.
  St. Aloysius Academy.
Roscoe—High School.
Roslyn—High School.
Round Lake—*Summer Institute.*
Rouses Point—High School.
Roxbury—High School.
Rushford—High School.
Rushville—High School.
Russell—Knox Memorial High School.
Rye—
  High School.
  Seminary.
Sacket Harbor—Sacket High School.
Sag Harbor—Pierson High School.
St. Johnsville—High School.
St. Regis Falls—High School.
Salamanca—High School.
Salem—Washington Academy.
Sandy Creek—High School.
Saranac Lake—High School.
Saratoga Springs—
  High School.
  St. Faith's Academy.
Saugerties—High School.
Sauquoit—High School.
Savannah—High School.
Savona—High School.
Sayville—High School.
Schaghticoke—High School.
Schenectady—
  High School
  St. Joseph's Academy.
Schenevus—High School.
Schoharie—High School.
Schuylerville—High School.
Scio—High School.
Scotia—High School.
Scottsville—High School.
Sea Cliff—High School.
Seneca Falls—Mynderse Academy.
Sharon Springs—High School.
Shelter Island—High School.
Sherburne—High School.

Sherman—High School.
Shortsville—High School.
Sidney—High School.
Silver Creek—High School.
Silver Springs—High School.
Sinclairville—High School.
Skaneateles—High School.
Sodus—High School.
Solvay—High School.
South Dayton—High School.
South Glens Falls—High School.
South Otselic—High School.
Southampton—High School.
Southold—High School.
Spencer—High School.
Spencerport—High School.
Spring Valley—High School.
Springville—Griffith Institute and Union School.
Stamford—Seminary and Union School.
Stillwater—High School.
Stony Point—High School.
Suffern—High School.
Syracuse—
    Academy of Sacred Heart.
    Central High School.
    Christian Brothers Academy.
    Goodyear-Burlingame School.
    North High School.
    St. John's Catholic Academy.
    St. Lucy's Academy.
    Technical High School.
    Travis Preparatory School.
Tannersville—High School.
Tarrytown—
    Hackley School.
    The Knox School.
    Marymount Secondary School.
    Washington Irving High School.
Theresa—High School.
Ticonderoga—High School.
Tompkinsville—*Augustinian Academy.*
Tonawanda—High School.
Troy—
    Emma Willard School.
    High School.
    La Salle Institute.
    St. Joseph's Academy.
    St. Patrick's Academy of Troy.
    St. Peter's Academy.
    Troy Academy.
Trumansburg—High School.
Tuckahoe—Waverly High School.
Tully—High School.
Tupper Lake—High School.
Tuxedo Park—Tuxedo High School.
Unadilla—High School.
Union Springs—
    High School.
    Oakwood Seminary.
Utica—
    Catholic Academy.
    Female Academy.
    Free Academy.
Valatie—High School.
Valley Falls—High School.
Valhalla—*Chappaqua Mountain Institute.*
Vernon—High School.
Verona—High School.
Victor—High School.
Waddington—High School.
Walden—High School.
Wallkill—High School.
Walton—High School.
Walworth—High School.
Warner—High School.
Warrensburg—High School.
Warsaw—High School.
Warwick—Institute.
Waterford—High School.
Waterloo—High School.
Watertown—
    High School.
    Immaculate Heart Academy.
Waterville—High School.
Watervliet—
    Academy.
    High School.
    St. Patrick's Academy.
Watkins—High School.
Waverly—High School.
Wayland—High School.
Webster—High School.
Weedsport—High School.
Wells—High School.
Wellsville—High School.
Westchester—*Clason Point Military Academy.*
West Hampton Beach—High School.
West Winfield—High School.
Westfield—Academy and Union School.
West New Brighton—*Westerleigh Collegiate Institute.*
Westport—High School.
White Plains—High School.
Whitehall—High School.
Whitesboro—High School.
Whitney Point—High School.
Williamson—High School.
Williamsville—High School.
Willsboro—High School.
Wilson—High School.
Windham—High School.
Windsor—High School.
Woodhull—High School.
Wolcott—Leavenworth Institute and Wolcott High School.
Worcester—High School.
Wyoming—Middlebury Academy and Union School.
Yonkers—
    High School.
    Philipse Manor School.

NORTH CAROLINA.

Schools accredited by the University of North Carolina, December, 1915.

	Units.
Admission requirements	14.0
Prescribed units:	
English	3.0
Mathematics	3.0
History	2.0
Greek	2.0
Latin	3.7
Elective	0.3
Or, instead of 3 last-named:	
Latin	3.7
French or German	2.0
Elective	0.3
Or these:	
French	2.0
German	2.0
Science	1.0
Elective	1.0

- Asheville—
  - *Asheville School.*
  - *Bingham School.*
  - City High School.
  - *Normal and Collegiate Institute.*
  - *St. Genevieve's Academy.*
- Brevard—*Institute.*
- Cary—High School.
- Chapel Hill—High School.
- Charlotte—
  - City High School.
  - *Horner Military School.*
- Concord—High School.
- Durham—
  - City High School.
  - *Trinity Park School.*
- Elizabeth City—High School.
- Enfield—High School.
- Flat Rock—*Fleet School.*
- Fremont—High School.
- Goldsboro—City High School.
- Greensboro—City High School.
- Greenville—High School.
- Henderson—City High School.
- Hendersonville—
  - High School.
  - *Fassifern School.*
  - *Blue Ridge School for Boys.*
- Jamestown—High School.
- Laurinburg—High School.
- Lenoir—High School.
- Lumberton—High School.
- Marion—High School.
- Mars Hill—*College.*
- Monroe—High School.
- Oak Ridge—*Institute.*
- Pleasant Garden—High School.
- Raleigh—City High School.
- Rutherfordton—*Westminster School.*
- Salisbury—City High School.
- Tarboro—High School.
- Warrenton—High School.
- Whitsett—*Institute.*
- Wilmington—City High School.
- Wilson—City High School.
- Winston-Salem—
  - City High School.
  - *Salem Academy.*

NORTH DAKOTA.

Approved by the State board of education and accredited by the University of North Dakota, November, 1915.

	Units.
University admission requirements	15
Prescribed units:	
English	3
Mathematics	1
Three units in 1 and 2 in another; or 2 units in each of 3 of the following 4 groups—Foreign language (at least 2 units must be in the same language); sciences; social sciences; mathematics	6
Electives	5

- Beach—Agricultural High School.
- Bismarck—High School.
- Bottineau—
  - High School.
  - State School of Forestry.
- Cando—High School.
- Carrington—Agricultural High School.
- Casselton—High School.
- Cavalier—High School.
- Cooperstown—High School.
- Devils Lake—High School.
- Dickinson—High School.
- Drayton—High School.
- Edgeley—High School.
- Enderlin—High School.
- Fargo—
  - *College Academy.*
  - High School.
  - Model High School of North Dakota Agricultural College.
  - *Sacred Heart Academy.*
- Grafton—Agricultural High School.

Grand Forks—High School.
Hankinson—High School.
Harvey—High School.
Hillsboro—High School.
Hope—High School.
Hunter—High School.
Jamestown—
    College Academy.
    High School.
    St. John's Academy.
Kenmare—High School.
Lakota—High School.
La Moure—Agricultural High School
Langdon—High School.
Larimore—High School.
Lidgerwood—High School.
Lisbon—High School.
Mandan—High School.
Mayville—High School.
Michigan—High School.
Minot—High School.
Minto—High School.
New Rockford—High School.
Oakes—High School.
Park River—High School.
Pembina—High School.
Rolla—High School.
Rugby—High School.
St. Thomas—High School.
University—Model High School of University of North Dakota.
Valley City—High School.
Velva—Agricultural High School.
Wahpeton—
    High School.
    State School of Science.
Williston—High School.

OHIO.

"First-grade" secondary schools approved by the department of public instruction and accredited by Ohio State University for the year 1915-16.[1]

	Units.
University admission requirements	15
The following distribution of units is strongly recommended:	
English	3
Mathematics	2
History	1
Science	1
Foreign language	4
Electives	4

"If the distribution of units does not meet the above recommendation, the student will be required to carry courses in the university to make up the deficiency."

Ada—
    High School.
    Ohio Northern University, Preparatory Department.
Adena—High School.
Akron—
    Buctel Academy.
    Central High School.
    South High School.
    West High School.
Albany—High School.
Alexandria—St. Albans High School.
Alliance—High School.
Amanda—High School.
Amelia—High School.
Amesville—High School.
Amherst—High School.
Andover—High School.
Anna—High School.
Ansonia—High School.
Antioch—*Academy.*
Antwerp—Carryall Township High School.
Arcadia—Washington Township High School.
Arcanum—High School.
Archbold—High School.
Arlington—High School.
Ashland—High School.
Ashley—High School.
Ashtabula—High School.
Ashtabula Harbor—High School.
Ashville—High School.
Athens—
    Amesville Township High School.
    High School.
Atlanta—Perry Township High School.
Attica—High School.
Austinburg—
    Grand River Institute.
    High School.
Bainbridge—High School.
Baltimore—High School.
Barberton—High School.
Barnesville—
    Friends Boarding School.
    High School.
Basil—High School.
Batavia—High School.
Bath—High School.
Beallsville—Sunbury High School.
Bedford—High School.
Bellaire—High School.
Bellbrook—Sugarcreek Township High School.
Belle Center—McArthur-Huntsville High School.
Bellefontaine—High School.
Bellevue—High School.
Belleville—High School.
Belpre—High School.
Benton Ridge—High School.
Berea—
    Baldwin-Wallace College Academy.
    High School.
Berlin Heights—High School.

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[1] The department of public instruction approves only the public high schools.

Bethesda—High School.
Beverly—High School.
Bidwell—Bidwell-Porter Township High School.
Bloomdale—High School.
Bloomville—Bloom Township High School.
Bluffton—
  College Academy.
  High School.
Bowling Green—High School.
Bradford—High School.
Bradner—High School.
Brecksville—High School.
Bremen—High School.
Bridgeport—High School.
Brink Haven—High School.
Brookville—High School.
Brunswick—Hinckley Township High School.
Bryan—High School.
Bucyrus—High School.
Burlington—High School.
Butler—High School.
Byesville—High School.
Cadiz—High School.
Caldwell—High School.
Cambridge—High School.
Camden—High School.
Campbellstown—Jackson Township High School.
Canal Dover—High School.
Canal Fulton—High School.
Canal Winchester—High School.
Canfield—Joint High School.
Canton—
  Central High School.
  North High School.
Cardington—High School.
Carey—High School.
Carroll—High School.
Carrollton—High School.
Cedarville—High School.
Celina—High School.
Centerburg—High School.
Chagrin Falls—High School.
Chardon—High School.
Chauncey—High School.
Chesterhill—Marion Township High School.
Chesterland—Chester Township High School.
Chicago Junction—High School.
Chillicothe—High School.
Cincinnati—
  Clifton High School.
  College Preparatory School for Girls.
  Franklin School.
  Hartwell High School.
  Hughes High School.
  Madisonville High School.
  Ohio Mechanics' Institute.
  Pleasant Ridge High School.
  University School.
  Walnut Hills High School.
  West Night High School.
  Woodward High School.
Circleville—
  High School.
  Jackson Township High School.
  Pickaway Township High School.
Clarksburg—Deerfield Township High School.
Cleveland—
  Central High School.
  Central Institute.
  East High School.
  East Technical High School.
  Glenville High School.
  High School of Commerce.
  Lincoln High School.
  South High School.
  University School.
  West Technical High School.
Cleveland Heights—High School.
Clinton—High School.
Clyde—High School.
Coalton—High School.
Coldwater—
  High School.
  Washington Township High School.
College Corner—High School.
College Hill—*Ohio Military Institute.*
Columbiana—High School.
Columbus—
  Academy.
  Clinton High School.
  East High School.
  High School of Commerce.
  North High School.
  St. Marys of the Springs.
  School for Girls.
  South High School.
  University School.
  West High School.
Columbus Grove—High School.
Commercial Point—Scioto Township High School.
Conneaut—High School.
Continental—High School.
Convoy—High School.
Coolville—High School.
Copley—High School.
Corning—High School.
Cortland—High School.
Coshocton—High School.
Covington—High School.
Crestline—High School.
Creston—High School.
Crooksville—High School.
Croton—Hartford Township High School.
Cumberland—High School.
Custar—
  High School.
  Milton Township High School.
Cuyahoga Falls—
  High School.
  Stow Township High School.
Cygnet—High School.
Dalton—High School.
Damascus—Goshen Township High School.
Danville—Buckeye City High School.
Dayton—
  Harrison Township High School.
  Jefferson Township High School.
  Madison Township High School.
  New Lyme Institute.
  Parker High School.
  St. Aloysius Academy.
  St. Mary's Institute.

Dayton—Continued.
  Steele High School.
  Stivers Manual Training High School.
  Violet Township High School.
  Washington Township High School.
Defiance—High School.
De Graff—High School.
Delaware—
  High School.
  Liberty Township High School.
Delphos—High School.
Delta—High School.
Dennison—High School.
Derby—High School.
Dola—Washington Township High School.
Dorset—High School.
Dover—High School.
Doylestown—High School.
Dresden—High School.
Dublin—High School.
Dunkirk—High School.
Duvall—Madison Township High School.
East Cleveland—High School.
East Liverpool—High School.
Eaton—High School.
East Palestine—High School.
Edgerton—High School.
Edison—High School.
Edon—High School.
Elmore—High School.
Elyria—High School.
Englewood—Randolph Township High School.
Enon—Madriver Township High School.
Etna—High School.
Euclid—
  Central High School.
  Shore High School.
Fairfield—Bath Township High School.
Farmdale—Johnston Township High School.
Farmersville and Jackson—High School.
Fayette—High School.
Findlay—High School.
Flushing—High School.
Forest—High School.
Forgy—Bethel Township High School.
Fort Recovery—High School.
Fostoria—High School.
Frankfort—High School.
Franklin—High School.
Frazeysburg—High School.
Fredericksburg—High School.
Fredericktown—High School.
Freeport—High School.
Fremont—High School.
Gahanna—High School.
Galena—High School.
Galion—High School.
Gallipolis—
  Academy High School.
  Lincoln High School.
Gambier—High School.
Garrettsville—High School.
Geneva—High School.
Georgetown—High School.
Germantown—High School.
Gibsonburg—High School.
Girard—High School.
Glendale—High School.
Glenford—Harrison Township High School.
Glouster—High School.
Gomer—Sugarcreek Township High School.
Good Hope—Wayne Township High School.
Goshen—High School.
Grafton—High School.
Grand View Heights—High School.
Granville—
  Doane Academy.
  High School.
Greenfield—High School.
Greenspring—High School.
Greenville—High School.
Greenwich—High School.
Grove City—High School.
Groveport—High School.
Guysville—Stewart-Rome Township High School.
Hamilton—High School.
Hanover—High School.
Harrison—High School.
Hartford—High School.
Hartville—High School.
Hartwell—St. Bernard High School.
Hebron—High School.
Hicksville—High School.
Highland—High School.
Hilliards—High School.
Hillsboro—High School.
Hiram—High School.
Holgate—High School.
Homer—Burlington Township High School.
Homerville—Homer Township High School.
Hopedale—High School.
Hudson—High School.
Huron—High School.
Ironton—High School.
Irwin—Union Township High School.
Jacksonville—High School.
Jamestown—High School.
Jefferson—High School.
Jeffersonville—High School.
Jewett—High School.
Johnstown—High School.
Junction City—High School.
Kalida—High School.
Kent—
  High School.
  Streetsboro High School.
Kenton—High School.
Kings Mills—High School.
Kingston—High School.
Kingsville—High School.
Kinsman—
  High School.
  Vernon Township High School.
Lafayette—Jackson-Joint High School.
Lake—Uniontown High School.
Lakeside—Danbury Township High School.
Lakewood—High School.
Lancaster—
  High School.
  Rushville Township High School.
Lebanon—High School
Leesburg—High School.
Lees Creek—Wayne Township High School.
Leetonia—High School.

Leipsic—High School.
Le Roy—High School.
Lewisburg — Lewisburg - Harrison Joint High School.
Lexington—High School.
Liberty Center—High School.
Lima—High School.
Lisbon—High School.
Lockland—High School.
Lockwood—Greene Township High School.
Lodi—High School.
Logan—High School.
London—
  High School.
  Monroe Township High School.
Lorain—High School.
Loudonville—High School.
Louisville—High School.
Loveland—High School.
Lowell—High School.
Lowellville—High School.
Lucasville—Valley Township High School.
Lynchburg—High School.
McArthur—High School.
McClure—Damascus Township High School.
McComb—
  High School.
  Union Township High School.
Madison—High School.
McConnelsville—Malta - McConnellsville High School.
Manchester—High School.
Mansfield—High School.
Mantua—High School.
Marion—
  High School.
  St. Mary's School.
Marietta—High School.
Martinsburg—High School.
Martins Ferry—High School.
Martinsville—High School.
Marysville—
  High School.
  Jerome Township High School.
Mason—High School.
Massillon—High School.
Maumee—High School.
Mechanicsburg—High School.
Medina—
  Granger Township High School.
  High School.
Melmore—Eden Township High School.
Mendon—Mendon-Union High School.
Metamora—High School.
Miamisburg—High School.
Middlefield—High School.
Middleport—High School.
Middletown—High School
Milan—High School.
Milford—High School.
Milford Center—Union High School.
Millersburg—High School.
Mineral City—High School.
Minerva—High School.
Mingo Junction—High School.
Minster—High School.
Monroe—Lemon Township High School.
Monroeville—High School.
Montpelier—High School.
Morrow—High School.
Mount Blanchard—High School.
Mount Eaton—Paint Township High School.
Mount Gilead—High School.
Mount Healthy—High School.
Mount Orab—High School.
Mount Pleasant—High School.
Mount Sterling—High School.
Mount Vernon—High School.
Mount Victory—High School.
Murray—High School.
Napoleon—High School.
Nelsonville—High School.
Nevada—High School.
New Albany—High School.
Newark—High School.
New Bremen—High School.
New Carlisle—High School.
Newcomerstown—High School.
New Concord—High School.
New Holland—High School.
New Lexington—High School.
New London—High School.
New Madison—High School.
New Matamoras—Matamoras High School.
New Paris—Jefferson Township High School.
New Philadelphia—High School.
New Richmond—High School.
New Straitsville—High School.
New Vienna—High School.
New Washington—High School.
Newton Falls—High School.
Niles—High School.
North Baltimore—High School
North Hampton—German Township High School.
North Lewisburg—High School.
North Lima—High School.
Norwalk—High School.
Norwood—High School.
Nova—Troy Township High School.
Oak Harbor—High School.
Oak Hill—High School.
Oberlin—
  Academy.
  High School.
Ohio City—High School.
Okeana—Morgan Township High School.
Orrville—High School.
Orwell—High School.
Osborn—High School.
Ostrander—High School.
Ottawa—
  Blanchard Township High School.
  High School.
Ottoville—High School.
Oxford—
  College Academy.
  High School.
Painesville—High School.
Pandora—Riley Township High School.
Pataskala—High School.
Paulding—High School.
Payne—High School.
Peebles—High School.
Pemberville—High School.

Perry—High School.
Perrysburg—High School.
Pickerington—Violet Township High School.
Piketon—High School.
Pioneer—High School.
Piqua—High School.
Plain City—High School.
Plattsburg—Harmony Township High School.
Pleasant Hill—High School.
Pleasantville—High School.
Plymouth—High School.
Pomeroy—High School.
Port Clinton—High School.
Portsmouth—High School.
Port William—Liberty Township High School.
Prairie Depot—High School.
Prospect—High School.
Quaker City—High School.
Ravenna—High School.
Rawson—High School.
Reynoldsburg—High School.
Richwood—High School.
Rio Grande—Raccoon Township High School.
Ripley—High School.
Rising Sun—High School.
Rockford—High School.
Rosedale—Pike Township High School.
Roseville—High School.
Rosewood—Adams Township High School.
Roundhead—High School.
Rudolph—High School.
Rushsylvania—High School.
Sabina—High School.
St. Clairsville—High School.
St. Henry—High School.
St. Martin—*Ursuline Academy.*
St. Marys—High School.
St. Paris—High School.
Salem—High School.
Salineville—High School.
Sandusky—High School.
Savannah—*Academy.*
Sardinia—High School.
Scio—
    Academy High School.
    High School.
Sebring—High School.
Selma—High School.
Senecaville—High School.
Seville—High School.
Shadyside—High School.
Sharon Center—Sharon Township High School.
Shawnee—High School.
Shelby—High School.
Sherwood—
    Delaware Township High School.
    High School.
Shiloh—High School.
Shreve—High School.
Sidney—High School.
Smithfield—High School.
Somerset—High School.
Somerton—Somerset Township High School.
South Charleston—High School.
South Euclid—Euclid Township High School.
South Salem—Buckskin Township High School.
South Solon—Stokes Township High School.
Spencerville—High School.
Springfield—
    Clifton Township High School.
    High School.
    St. Raphael's School.
Steubenville—High School.
Strasburg—High School.
Strongville—High School.
Stryker—High School.
Sugarcreek—High School.
Summit Station—Lima Township High School.
Sunbury—High School.
Swanton—High School.
Sycamore—High School.
Sylvania—High School.
Tadnor—Butler Township High School.
Terre Haute—Mad River Township High School.
Thornville—High School.
Thurston—Walnut Township High School.
Tiffin—
    College of the Ursuline Sisters.
    Heidelberg Academy.
    High School.
Tippecanoe City—Bethel Township High School.
Toledo—
    Scott High School.
    Smead School.
    Waite High School.
Toronto—High School.
Trenton—High School.
Troy—High School.
Twinsburg—High School.
Union City—High School.
Upper Sandusky—High School.
Urbana—
    Concord Township High School.
    High School.
    Salem Township High School.
    University School.
Urichsville—High School.
Utica—High School.
Valley City—Liverpool Township High School.
Van Buren—High School.
Van Wert—Convoy Township High School.
Vermilion—High School.
Versailles—High School.
Vincent—Barlow Township High School.
Wadsworth—High School.
Wakeman—High School.
Wapakoneta—High School.
Warren—High School.
Washington C. H.—High School.
Waterford—High School.
Waterville—High School.
Wauseon—High School.
Waverly—High School.
Waynesfield—High School.
Waynesville—High School.
Wellington—High School.
Wellston—High School.
Wellsville—High School.
Welshfield—Troy Township High School.
West Alexandria—High School.
West Carrollton—High School.
Westerville—Waterville Township High School.
West Jefferson—High School.
West Lafayette—High School.

West Liberty—High School.
West Mansfield—High School.
West Milton—High School.
West Park—High School.
West Richfield—Richfield Township High School.
West Salem—High School.
West Union—High School.
West Unity—High School.
Weston—High School.
Westville—Mad River Township High School.
Wharton—High School.
Wheelersburg—High School.
Wilkesville—High School.
Williamsburg—High School.
Williamsfield—
- High School.
- Wayne Township High School.

Williamsport—Deer Creek High School.
Willoughby—Wayne Township High School.
Wilmington—
- High School.
- Mount Pleasant Township High School.

Winchester—High School.
Windham—High School.
Woodsfield—High School.
Woodstock—High School.
Woodville—High School.
Wooster—
- *Academy.*
- High School.

Worthington—High School.
Wyoming—High School.
Xenia—
- Beavercreek Township High School.
- Caesarcreek Township High School.
- Central High School.
- East Main Street High School.
- Ohio Sailors and Soldiers Home.

Yellow Springs—High School.
Youngstown—
- Coitsville Township High School.
- High School.

Zanesfield—Zanesfield-Jefferson High School.
Zanesville—High School.

OKLAHOMA.

Schools approved by the State Board of Education and fully affiliated with the University of Oklahoma, January 1, 1916.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2
History	1
Science	1
Foreign language (one)	2
Electives	6

Ada—High School.
Afton—High School.
Altus—High School.
Arapaho—High School.
Ardmore—High School.
Atoka—High School.
Bartlesville—High School.
Beggs—High School.
Blackwell—High School.
Boswell—High School.
Broken Arrow—High School.
Carney—High School.
Chandler—High School.
Checotah—High School.
Cherokee—High School.
Chickasha—
- High School.
- *Oklahoma College for Women, Academy.*

Claremore—University Preparatory School.
Cleveland—High School.
Clinton—High School.
Coalgate—High School.
Collinsville—High School.
Copan—High School.
Cordell—
- *Cordell Christian College, Academy.*
- High School.

Cushing—High School.
Custer—High School.
Davis—High School.
Dewey—High School.
Drumwright—High School.
Durant—High School.
Eldorado—High School.
Elk City—High School.
El Reno—High School.
Enid—
- High School.
- *Phillips University High School.*

Eufaula—High School.
Fairfax—High School.
Fairview—High School.
Francis—High School.
Geary—High School.
Grandfield—High School.
Granite—High School.
Grove—High School.
Guthrie—
- High School.
- *Oklahoma Methodist University, Academy.*

Guymon—High School.
Hennessey—High School.
Henryetta—High School.
Hinton—High School.
Hobart—High School.
Holdenville—High School.
Hollis—High School.
Hominy—High School.
Hugo—High School.
Keats—High School.
Kiefer—High School.
Kingfisher—
- High School.
- *Kingfisher College, Academy.*

Lawton—High School.
Lexington—High School.
Lindsay—High School.
Madill—High School.
Mangum—High School.
Marietta—High School.
Marlow—High School.
Maud—High School.
McAlester—High School.
Medford—High School.
Miami—High School.
Mountain View—High School.
Muldrow—High School.
Muskogee—High School.
Newkirk—High School.
Noble—High School.
Norman—High School.
Nowata—High School.
Okemah—High School.
Oklahoma—High School.
Okmulgee—High School.
Oktaha—High School.
Pawnee—High School.
Pauls Valley—High School.
Perry—High School.
Ponca City—High School.
Pond Creek—High School.
Pryor—High School.
Purcell—High School.
Ramona—High School.
Roff—High School.
Ryan—High School.
Sallisaw—High School.
Sapulpa—High School.
Sayre—High School.
Seminole—High School.
Shawnee—High School.
Snyder—High School.
Stillwater—High School.
Stillwell—High School.
Stigler—High School.
Sulphur—High School.
Tecumseh—High School.
Temple—High School.
Texhoma—High School.
Thomas—High School.
Tishomingo—High School.
Tonkawa—University Preparatory School.
Tulsa—
    Henry Kendall College Academy.
    High School.
Vinita—High School.
Wagoner—High School.
Walter—High School.
Wapanucka—High School.
Waurika—High School.
Waynoka—High School.
Weleetka—High School.
Wewoka—High School.
Wilburton—High School.
Woodward—High School.
Wynnewood—High School.
Yukon—High School.

OREGON.

Standardized by the State Board of Education and accredited by the University of Oregon for the year 1915-16.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2
History	1
Science	1
One foreign language	2
Electives	6

Airlie—High School.
Albany—High School.
Alpine—High School.
Alsea—High School.
Amity—High School.
Arlington—High School.
Ashland—High School.
Astoria—High School.
Athena—High School.
Baker—
    St. Francis Academy.
    High School.
Ballston—High School.
Bandon—High School.
Bay City—High School.
Beaverton—High School.
Bend—High School.
Bonanza—High School.
Brownsville—High School.
Burns—Harney County High School.
Canby—High School.
Canyon City—High School.
Canyonville—High School.
Carlton—High School.
Central Point—High School.
Clatskanie—High School.
Coburg—High School.
Colton—High School.
Condon—Gilliam County High School.
Coos River—High School.
Coquille—High School.
Corbett—High School.
Corvallis—High School.
Cottage Grove—High School.
Cove—High School.
Creswell—High School.
Crow—High School.
Culver—High School.
Dallas—High School.
Dayton—High School.
Dorena—High School.
Drain—High School.
Dufur—High School.
Dundee—High School.
Echo—High School.
Elgin—High School.

Elmira—High School.
Enterprise—Wallowa County High School.
Estacada—High School.
Eugene—High School.
Falls City—High School.
Florence—High School.
Forest Grove—High School.
Fossil—Wheeler County High School.
Freewater—High School.
Glendale—High School.
Gold Beach—High School.
Gold Hill—High School.
Grants Pass—High School.
Gresham—High School.
Haines—High School.
Halfway—High School.
Halsey—High School.
Harrisburg—High School.
Helix—High School.
Heppner—High School.
Hermiston—High School.
Hillsboro—High School.
Hood River—High School.
Huntington—High School.
Imbler—High School.
Independence—High School.
Irving—High School.
Jefferson—High School.
John Day—High School.
Joseph—High School.
Junction City—High School.
Klamath Falls—County High School.
La Grande—High School.
Lakeview—High School.
Leaburg—High School.
Lebanon—High School.
Lorane—High School.
Madras—High School.
Mapleton—High School.
Marshfield—High School.
McCoy—Bethel High School.
McMinnville—High School.
Medford—High School.
Merrill—High School.
Mill City—High School.
Milton—
    Columbia Junior College.
    High School.
Milwaukee—High School.
Molalla—High School.
Monmouth—High School.
Monroe—High School.
Monro—High School.
Mount Angel—
    Academy.
    College.
Myrtle Creek—High School.
Myrtle Point—High School.
Nehalem—Union High School.
Newberg—High School.
    Pacific Academy.
Newport—High School.
North Bend—High School.
Nyssa—High School.
Oakland—High School.
Ontario—High School.
Oregon City—High School.
Orenco—High School.
Pendleton—
    St. Joseph's Academy.
    High School.
Philomath—High School.
Phoenix—High School.
Pleasant Hill—Union High School No. 1.
Portland—
    Academy.
    Columbia University.
    Franklin High School.
    Hill Military Academy.
    James John High School.
    Jefferson High School.
    Lincoln High School.
    St. Helen's Hall.
    St. Joseph's School.
    St. Mary's Academy.
    Washington High School.
    Y. M. C. A. Preparatory School.
Prairie City—High School.
Prineville—Crook County High School.
Rainier—High School.
Redmond—High School.
Richland—High School.
Riddle—High School.
Rogue River—High School.
Roseburg—High School.
Saint Helens—High School.
Salem—High School.
Sandy—High School.
Scappoose—High School.
Scio—High School.
Scotts Mills—High School.
Seaside—High School.
Shedd—High School.
Sheridan—High School.
Silver Lake—High School.
Silverton—High School.
South Brownsville—High School.
Springfield—High School.
Stanfield—High School.
Stayton—High School.
Sumpter—High School.
Sutherlin—High School.
Tangent—High School.
The Dalles—High School.
Thurston—High School.
Tillamook—High School.
Toledo—High School.
Tualatin—High School.
Turner—High School.
Union—High School.
Vale—High School.
Walker—High School.
Wallowa—High School.
Walterville—Union High School.
Wasco—High School.
Weston—High School.
Willamina—High School.
Woodburn—High School.
Yamhill—High School.
Yoncalla—High School.

PENNSYLVANIA.

First-grade secondary schools approved by the Department of Public Instruction of Pennsylvania, for the year ended July, 1915.

Requirements for approval: Four years of nine months each; at least three teachers; recitation period 40 minutes in length; double period in laboratory work; a minimum of twenty 40-minute recitations of prepared work; adequate equipment for teaching science studies; a reference library covering all the subjects offered.

English required in each year; at least one unit of science; two units of mathematics; one unit of history; two units of foreign language.

Abington—High School (Township).
Albion—High School.
Allentown—High School.
Altoona—High School.
Alverton—East Huntingdon High School (Township).
Ambridge—High School.
Annville—High School (Township).
Ardmore—Lower Merion Township High School.
Ashland—High School.
Ashley—High School.
Aspinwall—High School.
Athens—High School.
Avalon—High School.
Bangor—High School.
Beaver—High School.
Beaver Falls—High School.
Beccaria—High School (Township).
Bedford—High School.
Bellevue—High School.
Bellefonte—High School.
Ben Avon—High School.
Benton—High School.
Berwick—
    High School.
    West Berwick High School.
Berwyn—Easttown-Tredyffrin Township High School.
Bethlehem—
    High School.
    Moravian Parochial School.
    Preparatory School.
Birdsboro—High School.
Blairsville—High School.
Bloomsburg—High School.
Blossburg—High School.
Boyertown—High School.
Braddock—High School.
Bradford—High School.
Bristol—High School.
Brockwayville—High School.
Brookville—High School.
Burgettstown—High School.
Butler—High School.
Cambridge Springs—High School.
Canonsburg—High School.
Canton—High School.
Carbondale—High School.
Carlisle—High School.
Catasauqua—High School.
Catawissa—High School.
Centerville—High School.
Chambersburg—High School.
Charleroi—High School.
Chester—High School.
Clairton—High School.
Clarion—High School.
Clearfield—High School.
Coatesville—High School.
Cochranton—High School.
Collegeville—High School.
Columbia—High School.
Conemaugh—East Conemaugh High School.
Conneautville—High School.
Coraopolis—High School.
Connellsville—High School.
Corry—High School.
Coudersport—High School.
Crafton—High School.
Curwensville—High School.
Dallastown—High School.
Damascus—High School.
Danville—High School.
Darby—High School.
Derry—High School.
Donora—High School.
Downingtown—High School.
Doylestown—High School.
Dubois—High School.
Dunbar—High School.
Dunmore—High School.
Duryea—High School.
Easton—High School.
East Stroudsburg—High School.
Elkland—High School.
Elkins Park—Cheltenham High School.
Ellwood City—High School.
Emlenton—High School.
Emporium—High School.
Ephrata—High School.
Erie—High School.
Evansburg—High School.
Everett—High School.
Farrell—High School.
Ford City—High School.
Franklin—High School.
Freedom—High School.
Freeland—High School.
Freeport—High School.
Galeton—High School.
George School—*George School.*
Gettysburg—High School.
Girard—High School.
Glassport—High School.
Greensburg—High School.
Greenville—High School.
Grove City—High School.
Halifax—High School.
Hamburg—High School.
Hanover—High School.
Harrisburg—*Academy.*
    High School.
    Technical High School.
Hatboro—High School.

Hawley—High School.
Hazleton—
  Hazel Township High School.
  Hanover Township High School.
Hollidaysburg—High School.
Homestead—High School.
Honesdale—High School.
Hummelstown—High School.
Huntingdon—High School.
  Juniata College (Preparatory Department).
Irwin—High School.
Jamestown—High School.
Jeannette—High School.
Jenkintown—High School.
Jersey Shore—High School.
Johnsonburg—High School.
Johnstown—High School.
Juniata—High School.
Kane—High School.
Kennett Square—High School.
Kingsley—High School (Township).
Kingston—High School.
  Dorranceton High School.
  Forty Fort High School.
  Wyoming Seminary.
Kittanning—High School.
Knoxville—High School.
Laceyville—High School
Lancaster—
  Boys' High School.
  Franklin and Marshall Academy.
  Girls' High School.
Lansdale—High School.
Lansdowne—High School.
Lansford—High School.
Larksville—High School.
Latrobe—High School.
Lebanon—High School.
Leechburg—High School.
Lemont Furnace—North Union Township High School.
Lewisburg—
  Bucknell Academy.
  High School.
Lewistown—High School.
Lititz—High School
Llanerch—Haverford Township High School.
Lock Haven—High School.
Lykens—High School.
McDonald—High School.
McKeesport—High School.
Mahanoy City—High School.
Manheim—High School.
Mansfield—High School.
Marienville—Jenks Township High School.
Mars—High School.
Mauch Chunk—High School.
Meadville—High School.
Mechanicsburg—High School.
Media—High School.
Mercer—High School.
Meshoppen—High School.
Meyersdale—High School.
Middletown—High School.
Milford—High School.
Millersburg—High School.
Milton—High School.
Minersville—High School.
Monaca—High School.
Mount Carmel—High School.
Mount Jewett—High School.
Mount Oliver—Knoxville High School.
Mount Pleasant—High School.
Mount Union—High School.
Monessen—High School.
Monongahela—High School.
Montrose—High School.
Muncy—High School.
Munhall—High School.
Myerstown—High School.
Nanticoke—High School.
Narberth—High School.
Nazareth—High School.
Nesquehoning—Mauch Chunk Township High School.
New Bethlehem—High School.
New Brighton—High School.
New Castle—High School.
New Kensington—High School.
Newport—High School.
Norristown—High School.
Northampton—High School.
North East—High School.
North Girard—Girard Township High School.
Northumberland—High School.
Oakmont—High School.
Oil City—High School.
Oxford—High School.
Palmyra—High School.
Parkesburg—High School.
Parnassus—High School.
Parsons—High School.
Patton—High School.
Pen Argyl—High School.
Pennsburg—*Perkiomen Seminary.*
Philadelphia—
  Central High School.
  De Lancey School.
  Episcopal Academy.
  Friends' Central School.
  Friends' Select School.
  Girls' High School.
  Northeast Manual High School.
  Roman Catholic High School for Boys.
  St. Joseph's College High School
  Southern Manual High School.
  Temple University Preparatory School.
  West Philadelphia (Boys') High School.
  William Penn Charter School.
  William Penn High School.
Phillipsburg—High School.
Phoenixville—High School.
Pittsburgh—
  Academy.
  Allegheny High School.
  Allegheny Preparatory School.
  Duquesne University (Preparatory Department).
  East Liberty Academy.
  Fifth Avenue High School.
  Peabody High School.
  Pittsburgh Central High School.
  Shady Side Academy.
  South High School.

- Pittston—
  - High School.
  - West Pittston High School.
- Pleasantville—High School.
- Plymouth—High School.
- Port Allegany—High School.
- Pottstown—High School.
- Pottsville—High School.
- Punxsutawney—High School.
- Reading—
  - Boys' High School.
  - Girls' High School.
  - *Schuylkill Seminary.*
- Red Lion—High School.
- Reedsville—Brown Township High School.
- Renovo—High School.
- Reynoldsville—High School.
- Ridgway—High School.
- Ridley Park—High School.
- Rochester—High School.
- Royersford—High School.
- St. Marys—High School.
- Sayre—High School.
- Scottdale—
  - High School.
  - Mount Pleasant Township High School.
- Scranton—
  - High School.
  - *Mount St. Mary's Seminary.*
  - *St. Thomas College.*
  - Technical High School.
- Sewickley—High School.
- Sharon—High School.
- Sharpsburg—High School (Joint).
- Sheffield—High School.
- Shenandoah—High School.
- Shamokin—High School.
- Sharpsville—High School.
- Shinglehouse—High School.
- Shippensburg—High School.
- Slatington—High School.
- Smethport—High School.
- South Bethlehem—High School.
- South Brownsville—High School.
- Somerset—High School.
- Spring City—High School.
- State College—High School.
- Steelton—High School.
- Stroudsburg—High School.
- Sunbury—High School.
- Susquehanna—High School.
- Swarthmore—
  - High School.
  - *Preparatory School.*
- Swissvale—
  - Edgewood Park High School.
  - High School.
- Tamaqua—High School.
- Tarentum—High School.
- Tidioute—High School.
- Titusville—High School.
- Towanda—High School.
- Troy—High School.
- Tunkhannock—High School.
- Turtle Creek—High School.
- Tyrone—High School.
- Union City—High School.
- Uniontown—High School.
- Upper Darby—High School (Township).
- Vandergrift—High School.
- Wanamie—Newport Township High School.
- Warren—High School.
- Washington—
  - East Washington High School.
  - High School.
- Waterford—High School (Joint).
- Wayne—Radnor High School (Township).
- Waynesboro—High School.
- Waynesburg—High School.
- Wellsboro—High School.
- West Chester—High School.
- Westfield—High School.
- West Newton—High School.
- West Philadelphia—High School.
- Westtown—*Boarding School.*
- Wiconisco—High School (Township).
- Wilkes-Barre—
  - High School.
  - *St. Mary's High School.*
- Wilkinsburg—High School.
- Williamsport—
  - High School.
  - South Williamsport High School.
  - *Williamsport Dickinson Seminary.*
- Williamstown—High School.
- Windber—High School.
- Woodlawn—High School.
- Yeagertown—Derry Township High School.
- York—High School.
- Youngsville—High School.
- Zelienople—High School.

RHODE ISLAND.

Approved by the Rhode Island State Board of Education, December, 1915.

In order to be approved, high schools must run at least 38 weeks in each year; must employ three or more teachers (one teacher for every 30 pupils enrolled), who shall be required to instruct not more than 5 hours in each school day; every teacher employed must hold certificate of qualifications granted by or under the authority of the State Board of Education; there must be maintained one or more courses of four years (following an elementary course of eight years) offering a minimum of 15 units of study; adequate library and laboratory facilities must be maintained.

- Barrington Center—Barrington High School.
- Bristol—High School.
- Central Falls—High School.
- East Providence—High School.
- Newport—Rogers High School.
- Pascoag—Burrillville High School.
- Pawtucket—High School.
- Peace Dale—South Kingstown High School.

- Providence—
  - Classical High School.
  - Cranston High School.
  - English High School.
  - Hope Street High School.
  - Technical High School.
- River Point—West Warwick High School.
- Valley Falls—Cumberland High School.
- Warren—High School.
- Westerly—High School.
- Wickford—North Kingstown High School.
- Woonsocket—High School.

SOUTH CAROLINA.

Public high schools accredited by the University of South Carolina, January, 1916.

Admission to regular freshman standing at the university is on 12 high-school units, and the university maintains a list of "approved" schools giving acceptably that amount of work. The "accredited" schools listed below, however, are schools giving acceptably 14 units, and their graduates are admitted to advanced standing at the university.

- Anderson—High School.
- Bamberg—High School.
- Batesburg—High School.
- Bennettsville—High School.
- Blacksburg—High School.
- Charleston—
  - High School.
  - Memminger High School.
- Clio—High School.
- Darlington—High School.
- Denmark—High School.
- Dillon—High School.
- Edgefield—High School.
- Florence—High School.
- Greenwood—High School.
- Honea Path—High School.
- Johnston—High School.
- Latta—High School.
- Marion—High School.
- Mullins—High School.
- Ninety Six—High School.
- North Augusta—High School.
- Rome—High School.
- St. Matthews—High School.
- Summerville—High School.
- Sumter—High School.
- Union—High School.
- Winnsboro—High School.
- Woodruff—High School.

SOUTH DAKOTA.

Accredited by the Department of Public Instruction and the University of South Dakota, for the year 1915-16.

	Units.
University admission requirements	15
Prescribed units:	
English	3
Mathematics	2
Electives	10

- Aberdeen—
  - High School.
  - Northern Normal and Industrial School.
- Academy—*Ward Academy.*
- Alexandria—High School.
- Armour—High School.
- Belle Fourche—High School.
- Beresford—High School.
- Big Stone City—High School.
- Bridgewater—High School.
- Brookings—
  - High School.
  - South Dakota State College of Agriculture and Mechanic Arts (Preparatory Department).
- Bryant—High School.
- Canton—
  - *Augustana College.*
  - High School.
- Centerville—High School.
- Chamberlain—
  - *Columbus College.*
  - High School.
- Clark—High School.
- Deadwood—High School.
- Dell Rapids—High School.
- Delmont—*Evangelical Lutheran Zions School.*
- De Smet—High School.
- Doland—High School.
- Egan—High School.
- Elk Point—High School.
- Elkton—High School.
- Eureka—*Lutheran College.*
- Fort Pierre—High School.
- Freeman—*College.*
- Geddes—High School.
- Groton—High School.
- Hot Springs—High School.
- Hurley—High School.
- Huron—
  - *College.*
  - High School.
- Ipswich—High School.
- Kimball—High School.
- Lake Preston—High School.
- Langford—High School.
- Lemmon—High School.
- Lennox—High School.
- Madison—
  - High School.
  - State Normal School.
- Mellette—High School.
- Milbank—High School.
- Miller—High School.
- Mitchell—
  - *Dakota Wesleyan University.*
  - High School.

- Mobridge—High School.
- Parker—High School.
- Philip—High School.
- Pierre—High School.
- Plankinton—High School.
- Platte—High School.
- Rapid City—
  - High School.
  - State School of Mines.
- Redfield—
  - *College.*
  - High School.
- Salem—High School.
- Sioux Falls—
  - *All Saints School.*
  - *College.*
- Sioux Falls—Continued.
  - High School.
  - *Lutheran Normal School.*
- Sisseton—High School.
- Spencer—High School.
- Spearfish—Normal School.
- Springfield—State Normal School.
- Sturgis—High School.
- Vermillion—High School.
- Wagner—High School.
- Watertown—High School.
- Wessington Springs—*Seminary.*
- Woonsocket—High School.
- Yankton—
  - *College.*
  - High School.

TENNESSEE.

Schools "fully accredited" by the University of Tennessee, April, 1916.

	Units.
Admission requirements	14
Prescribed units:	
English	3
Mathematics	2½
Foreign language	4
Electives	4½

- Ashland City—Cheatham County High School.
- Athens—McMinn County High School.
- Bell Buckle—*Webb School.*
- Benton—High School.
- Bolivar—High School.
- Bristol—High School.
- Brownsville—Haywood County High School.
- Brunswick—*Bolton College.*
- Byington—Karns High School
- Carthage—High School.
- Cedar Hill—High School.
- Chattanooga—
  - Central High School.
  - City High School.
  - *Girls' Preparatory School.*
  - *The McCallie School.*
  - *University School.*
- Chucky—High School.
- Clarksville—Montgomery County High School.
- Clifton—*Frank Hughes College.*
- Clinton—Anderson County High School.
- Columbia—
  - *Institute.*
  - Maury County High School.
  - *Military Academy.*
- Concord—Farragut High School.
- Cookeville—Putnam County High School.
- Cornersville—High School.
- Covington—Byars-Hall High School.
- Crossville—Cumberland County High School.
- Dayton—Rhea County High School.
- Decherd—High School.
- Dickson—High School.
- Ducktown—High School.
- Dyer—*West Tennessee College.*
- Dyersburg—High School.
- Etowah—McMinn County High School.
- Fayetteville—
  - Lincoln County High School.
  - *Morgan School.*
- Fountain City—Knox County High School.
- Franklin—
  - High School.
  - *Peoples' School.*
- Gallatin—*Hawkins School.*
- Gordonsville—High School.
- Greenfield—*Training School.*
- Harrogate—*Lincoln Memorial Academy.*
- Henderson—High School.
- Hixson—Hamilton County High School.
- Humboldt—High School.
- Huntingdon—Industrial and Training School.
- Jackson—City High School.
- Jasper—Marion County High School.
- Jellico—Campbell County High School.
- Johnson City—High School.
- Kimberlin Heights—*Johnson Academy.*
- Knoxville—City High School.
- Lawrenceburg—Lawrence County High School.
- Lebanon—*Castle Heights School.*
- Lenoir City—High School.
- Lewisburg—*Price-Webb School.*
- Lexington—High School.
- Livingston—*Overton Academy.*
- Lynnville—*Robert B. Jones School.*
- McKenzie—*McTyeire School.*
- McMinnville—City High School.
- Madisonville—High School.
- Manchester—Coffee County High School.
- Martin—
  - *Hall-Moody School.*
  - *McFerrin Training School.*
- Memphis—
  - Central High School.
  - *St. Mary's School.*
  - *University School.*
- Milan—High School.
- Monteagle—*Fairmont School.*
- Morristown—City High School.
- Mount Pleasant—High School.
- Murfreesboro—High School.

Nashville—
  Bible School.
  Bowen School.
  Duncan Preparatory School.
  Hume-Fogg High School.
  Montgomery-Bell Academy.
  University School.
  Ward-Belmont Seminary.
Obion—High School.
Paris—E. W. Grove High School.
Park City—High School.
Pleasant Hill—*Academy.*
Pulaski—
  High School.
  Martin College.
  Massey School.
Ridgely—High School.
Ripley—High School.
Rutherford—High School.
Sale Creek—High School.
Savannah—*Institute.*
Sewanee—*Military Academy.*
Shelbyville—*Brandon Training School.*
Soddy—Hamilton County High School.
Somerville—High School.
South Knoxville—Young High School.
Sparta—High School.
Spencer—*Burritt College.*
Springfield—
  High School.
  Peoples and Tucker School.
Spring Hill—*Branham and Hughes School.*
Sulphur Springs-Jonesboro—High School.
Sweetwater—*Tennessee Military Institute.*
Tullahoma—*Fitzgerald and Clarke School.*
Tyner—Hamilton County High School.
Union City—City High School.
Tiptonville—Lake County High School.
Troy—High School.
Wartrace—High School.
Washington College—*Washington College, Preparatory Department.*
White Haven—High School.
Winchester—High School.

TEXAS.

Schools of "Group I" affiliated with the University of Texas, June 15, 1915.

	Units.
Admission requirements	14
Prescribed units:	
English	3
Mathematics	2½
History	2
Electives	

Abilene—High School.
Alice—High School.
Alvin—High School.
Amarillo—High School.
Austin—
  High School.
  Kenilworth Hall.
  St. Mary's Academy.
  Whitis School.
Ballinger—High School.
Bastrop—High School.
Bay City—High School.
Beaumont—High School.
Beeville—High School.
Bellville—High School.
Belton—High School.
Big Spring—High School.
Bonham—High School.
Bowie—High School.
Brady—High School.
Brenham—
  Blinn Memorial College.
  High School.
Brownsville—High School.
Brownwood—High School.
Bryan—
  Allen Academy.
  High School.
Caldwell—High School.
Calvert—High School.
Cameron—High School.
Canyon—High School.
Center—High School.
Childress—High School.
Cisco—
  Britton's Training School.
  High School.
Clarksville—High School.
Cleburne—High School.
Coleman—High School.
Comanche—High School.
Corpus Christi—High School.
Corsicana—High School.
Crockett—High School.
Cuero—John C. French High School.
Dallas—
  The Hardin School for Boys.
  High School.
  Oak Cliff High School.
  The Terrill School.
Del Rio—High School.
Denison—High School.
Denton—High School.
Dublin—High School.
El Paso—High School.
Ennis—High School.
Farmersville—High School.
Floresville—High School.
Forney—High School.
Fort Worth—
  High School.
  North Fort Worth High School.
Gainesville—High School.
Galveston—Ball High School.
Garland—High School.
Gatesville—High School.
Georgetown—High School.
Gonzales—High School.

Graham—High School.
Grandview—High School.
Greenville—High School.
Hamilton—High School.
Haskell—High School.
Henderson—High School.
Henrietta—High School.
Hereford—High School.
Hico—High School.
Hillsboro—High School.
Honey Grove—High School.
Houston—
    High School.
    Houston Heights High School.
Hubbard—High School.
Huntsville—High School.
Itasca—High School.
Kaufman—High School.
Lagrange—High School.
Lampasas—High School.
Laredo—High School.
Llano—High School.
Lockhart—High School.
Longview—High School.
Lubbock—High School.
Lufkin—High School.
Mansfield—High School.
Marlin—High School.
Marshall—High School.
Mart—High School.
McGregor—High School.
McKinney—High School.
Meridian—*College.*
Mexia—High School.
Midland—High School.
Mineral Wells—High School.
Mineola—High School.
Nacogdoches—High School.
Navasota—High School.
Nocona—High School.
Orange—High School.
Ozona—High School.
Palestine—High School.
Paris—High School.
Pittsburg—High School.
Plainview—High School.
Port Arthur—High School.
Quanah—High School.
Richmond—High School.
Rockdale—High School.
San Angelo—High School.
San Antonio—
    Academy of Our Lady of the Lake.
    High School.
    Marshall Training School.
    San Antonio Academy.
    West Texas Military Academy.
San Augustine—High School.
San Benito—High School.
San Marcos—
    Baptist Academy.
    Coronal Institute.
    High School.
Seguin—High School.
Sherman—High School.
Smithville—High School.
Stamford—High School.
Stephenville—High School.
Sulphur Springs—High School.
Sweetwater—High School.
Taylor—High School.
Temple—High School.
Terrell—High School.
Texarkana—High School.
Timpson—High School.
Tyler—High School.
Uvalde—High School.
Victoria—High School.
Waco—High School.
Waxahachie—High School.
Weatherford—High School.
Wichita Falls—High School.
Winnsboro—High School.
Yoakum—High School.

Public high schools, in addition to those of "Group I" affiliated with the University of Texas, listed as "Class I" by the State Department of Education, April, 1916.

Schools of Class I must have not fewer than three teachers; a school term of at least eight scholastic months; a course of study in which 17½ units are required for graduation (a unit being defined as five recitations per week in a subject, each recitation being 35 to 40 minutes in length, and the subject being pursued for at least 36 weeks); laboratory apparatus sufficient to offer at least 2½ units in high-school sciences.

Alpine—High School.
Alto—High School.
Alvarado—High School.
Anson—High School.
Archer City—High School.
Arlington—High School.
Athens—High School.
Baird—High School.
Beaumont—South Park High School.
Bellevue—High School.
Bishop—High School.
Blanco—High School.
Blooming Grove—High School.
Bracketville—High School.
Breckenridge—High School.
Bridgeport—High School.
Buda—High School.
Buna—High School.
Burkburnett—High School.
Canadian—High School.
Carthage—High School.
Carrizo Springs—High School.
Celeste—High School.
Celina—High School.
Center—High School.
Childress—High School.
Chillicothe—High School.
Clarendon—High School.
Colorado—High School.
Columbus—High School.

Commerce—High School.
Conroe—High School.
Coolidge—High School.
Cooper—High School.
Corsicana—
  I. O. O. F. Home School.
  State Orphans' Home School.
Cotulla—High School.
Dalhart—High School.
Dallas—West Dallas High School.
Decatur—High School.
De Leon—High School.
Devine—High School.
Donna—High School.
Eagle Lake—High School.
Eagle Pass—High School.
Eastland—High School.
Edgewood—High School.
Edna—High School.
El Campo—High School.
Electra—High School.
Falfurrias—High School.
Ferris—High School.
Flatonia—High School.
Floydada—High School.
Fort Worth—Diamond Hill High School.
Franklin—High School.
Fredericksburg—High School.
Frost—High School.
Garrison—High School.
Giddings—High School.
Gilmer—High School.
Goldthwaite—High School.
Goliad—High School.
Gorman—High School.
Granbury—High School.
Grand Prairie—High School.
Grand Saline—High School.
Grapevine—High School.
Groesbeck—High School.
Groveton—High School.
Hallettsville—High School.
Hamlin—High School.
Handley—High School.
Harlingen—High School.
Harrisburg—High School.
Hearne—High School.
Hempstead—High School.
Henrietta—High School.
Hillebrandt—High School.
Hondo—High School.
Iowa Park—High School.
Italy—High School.
Jacksboro—High School.
Jacksonville—High School.
Jasper—High School.
Jefferson—High School.
Jourdanton—High School.
Karnes City—High School.
Kennedy—High School.
Kerens—High School.
Kerrville—High School.
Killeen—High School.
Kingsville—High School.
Kirbyville—High School.

Kyle—High School.
Ladonia—High School.
Lancaster—High School.
Leonard—High School.
Lewisville—High School.
Lindale—High School.
Livingston—High School.
Lockney—High School.
Lone Oak—High School.
Lorena—High School.
Luling—High School.
McAllen—High School.
Madisonville—High School.
Marble Falls—High School.
Marfa—High School.
Mason—High School.
Matador—High School.
Memphis—High School.
Mercedes—High School.
Merkel—High School.
Mertson—High School.
Miami—High School.
Midlothian—High School.
Milford—High School.
Mission—High School.
Mount Calm—High School.
Mount Pleasant—High School.
New Braunfels—High School.
Newton—High School.
Paducah—High School.
Palacios—High School.
Pearsall—High School.
Pecos—High School.
Petrolia—High School.
Pilot Point—High School.
Plano—High School.
Pleasanton—High School.
Polytechnic—Polytechnic Heights High School.
Port Lavaca—High School.
Post City—High School.
Reagan—High School.
Rising Star—High School.
Riverside—High School.
Rockport—High School.
Rockwall—High School.
Rosebud—High School.
Rosenberg—High School.
Rotan—High School.
Runge—High School.
Rusk—High School.
Sabinal—High School.
Sanderson—High School.
Sanger—High School.
San Saba—High School.
Santa Anna—High School.
Scranton—High School.
Seymour—High School.
Silverton—High School.
Sinton—High School.
Snyder—High School.
Somerville—High School.
Sonora—High School.
Sour Lake—High School.
Spur—High School.
Sterling City—High School.

Strawn—High School.
Tahoka—High School.
Teague—High School.
Texas City—High School.
Three Rivers—High School.
Throckmorton—High School.
Trinity—High School.
Troup—High School.
Tulia—High School.
Valley Mills—High School.
Van Alystine—High School.
Venus—High School.
Vernon—High School.
West—High School.
Wharton—High School.
Whitesboro—High School.
Whitney—High School.
Willis—High School.
Wills Point—High School.
Winters—High School.
Wolfe City—High School.
Wortham—High School.
Wylie—High School.
Yancy—High School.

UTAH.

Public high schools approved by the State Board of Education and accredited by the University of Utah, December, 1915.

	Units.
University admission requirements	15
Prescribed units:	
English	3
Mathematics	2
History	1
Electives	9

American Fork—High School.
Brigham—Boxelder County High School.
Coalville—High School.
Eureka—High School.
Fillmore—Millard County High School.
Grantsville—High School.
Heber—Wasatch County High School.
Kaysville—Davis County High School.
Lehi—High School.
Manti—High School.
Morgan—High School.
Moroni—High School.
Mount Pleasant—High School.
Nephi—High School.
Ogden—High School.
Panguitch—Garfield County High School.
Park City—High School.
Payson—High School.
Pleasant Grove—High School.
Price—Carbon County High School.
Richfield—High School.
Richmond—Cache County High School.
Roosevelt—Duchesne County High School.
Salt Lake City—
  (East Side) High School.
  Granite High School.
  (West Side) High School.
Sandy—Jordan High School.
Spanish Fork—High School.
Springville—High School.
Tooele—High School.

VERMONT.

Schools listed as "first class" by the State Board of Education of Vermont, October 1, 1915.

For a school of the first class at least two teachers are necessary and the time for recitation must be not less than 40 minutes for classes of 10 or more and not less than 30 minutes for classes of less than 10.

Bakersfield—*Brigham Academy.*
Barre—
  Goddard Seminary.
  High School.
Barton—High School.
Bellows Falls—High School.
Bennington—High School.
Bethel—High School.
Bradford—High School.
Brandon—High School.
Brattleboro—High School.
Bristol—High School.
Burlington—
  Bishop Hopkins Hall.
  High School.
  St. Mary's Academy.
Canaan—High School.
Chelsea—High School.
Chester—High School.
Danville—High School.
Derby—*Academy.*
Enosburg Falls—High School.
Essex Junction—High School.
Fairfax—Bellows Free Academy.
Fair Haven—High School.
Franklin—High School.
Hardwick—High School.
Highgate Center—High School.
Hinesburg—High School.
Hyde Park—High School.
Island Pond—High School.
Jericho Center—High School.
Johnson—High School.
Ludlow—High School.
Lyndon Center—*Lyndon Institute.*
McIndoe Falls—*McIndoes Academy.*
Manchester—*Burr and Burton Seminary.*
Middlebury—High School.
Montpelier—
  High School.
  Seminary.
Morrisville—High School.

Newbury—High School.
New Haven—High School.
Newport—High School.
North Bennington—High School.
North Craftsbury—*Craftsbury Academy.*
Northfield—High School.
North Troy—High School.
Orleans—High School.
Peacham—*Caledonia County Grammar School.*
Pittsford—High School.
Poultney—*Troy Conference Academy.*
Proctor—High School.
Randolph—High School.
Richford—High School.
Richmond—High School.
Rochester—High School.
Rutland—High School.
St. Albans—High School.
St. Johnsbury—*Academy.*
Saxtons River—*Vermont Academy.*
South Royalton—High School.
Springfield—High School.
Stowe—High School.
Swanton—
    High School.
    St. Ann's Academy.
Thetford—*Academy.*
Townshend—*Leland and Gray Seminary.*
Vergennes—High School.
Waterbury—High School.
Wells River—High School.
West Rutland—High School.
White River Junction—High School.
Wilmington—High School.
Windsor—High School.
Winooski—High School.
Woodstock—High School.

VIRGINIA.

Accredited (with exceptions noted) by the University of Virginia, the Virginia State Board of Education, and the Virginia Commission on Accredited Schools.

	Units.
University admission requirements	14
Prescribed units:	
English	3
Mathematics	2½
History	1
Latin (or Greek)	4 (or 2)
Electives	3½ (or 5½)

NOTE.—Beginning July 1, 1916, the State Board of Education will require for graduation from the "First Grade" high schools not less than 16 units, distributed as follows: English, 4; mathematics, 3; history, 2; science, 2; electives, 5.

Abington—William King High School.
Accomac—High School.[1]
Alexandria—
    City High School.
    Episcopal High School.
Altavista—High School.[1]
Amherst—High School.[2]
Amelia—High School.
Appalachia—High School.
Appomattox—Agricultural High School.
Ashland—High School.
Ashwood—High School.[2]
Basic—*Brandon Institute.*[3]
Bedford City—
    High School.
    Randolph-Macon Academy.
Big Stone Gap—High School.
Blacksburg—High School.
Blackstone—
    Academy.
    High School.
Bowling Green—Lee Maury High School.
Bristol—High School.
Buchanan—High School.
Buena Vista—High School.
Burkeville—High School.
Cape Charles—High School.
Capeville—High School.[1]
Carson—High School.[1]
Cartersville—Hamilton High School.[2]
Champe—Sunny Side High School.[1]
Charlotte Courthouse—Charlotte High School.
Charlottesville—
    High School.
    Jefferson School for Boys.
Chase City—High School.
Chatham—
    High School.[1]
    Training School for Boys.
Cheriton—High School.[1]
Chester—Agricultural High School.
Chincoteague—High School.[1]
Christiansburg—High School.
Churchland—High School.
Clifton Forge—High School.
Clintwood—High School.[1]
Cluster Springs—*Academy.*
Coeburn—High School.
Courtland—High School.[1]
Covington—High School.
Crewe—High School.
Danville—
    High School.
    The Danville School for Boys.
Dayton—*Shenandoah Collegiate Institute.*
Disputanta—High School.[1]
Driver—Agricultural High School.
Dublin—*Institute.*[3]
East Stone Gap—High School.
Edinburg—High School.
Elk Creek—High School.
Emporia—High School.

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[1] Provisionally accredited (for one year) by the Commission on Accredited Schools.
[2] Accredited by State board and Commission on Accredited Schools.
[3] Accredited by University only.

Fairfield—High School.[1]
Farmville—High School.
Fincastle—High School.
Forest Depot—*New London Academy.*
Fort Defiance—*Augusta Military Academy.*
Fork Union—*Military Academy.*
Franklin—High School.
Frankton—Frankton-Nassawadox High School.
Fredericksburg—High School.
Front Royal—
  High School.
  Randolph-Macon Academy.
Galax—High School.
Gate City—Shoemaker High School.
Gloucester—Botetourt High School.
Graham—High School.
Grundy—High School.[1]
Hamilton—High School.[2]
Hampton—High School.
Harrisonburg—High School.
Hayes Store—High School.[1]
Herndon—High School.
Highland Springs—High School.
Houston—High School.[1]
Jarratt—High School.
Kinsale—High School.[1]
Lawrenceville—High School.
Lebanon—High School.
Leesburg—High School.[1]
Lexington—High School.
Lignum—High School.[1]
Lincoln—High School.
Louisa—High School.
Luray—High School.
Lynchburg—High School.
Manassas—
  Agricultural High School.
  Eastern College Academy.
Marion—High School.
Martinsville—High School.
Max Meadows—High School.
McGaheysville—High School.
Middletown—Agricultural High School.[1]
Miller School—*Miller School.*
Monterey—High School.
Morrisville—High School.[1]
New Castle—High School.[1]
Newport News—High School.
Norfolk—
  Lafayette High School.
  Maury High School.
Norton—High School.
Oceana—High School.
Onancock—High School.
Orange—High School.
Palmyra—Normal High School.
Parksley—High School.[1]
Pearisburg—High School.[1]
Petersburg—High School.
Pacahontas—High School.
Portsmouth—
  Deep Creek High School.
  High School.
  Western Branch High School.
Pulaski—High School.
Radford—High School.
Reedville—High School.
Richlands—High School.
Richmond—
  Academy.
  Benedictine College.[3]
  The Chamberlayne School.
  John Marshall High School.
  McGuire's University School.
Roanoke—High School.
Round Hill—High School.[1]
Rural Retreat—High School.
Salem—High School.
Saltville—High School.
Scottsville—High School.
Smithfield—High School.[1]
South Boston—High School.
South Hill—High School.
South Norfolk—High School.
Staunton—
  High School.
  Military Academy.
Stony Creek—High School.
Strasburg—High School.
Suffolk—Jefferson High School.
Tazewell—High School.
Toano—High School.
Turbeville—Agricultural High School.
Wakefield—High School.
Warrenton—
  High School.
  Stuyvesant School.
Waverly—High School.
Waynesboro—
  Fishburne Military Academy.
  High School.
West Point—High School.[1]
Whaleyville—High School.
White Stone—High School.[4]
Wicomico Church—High School.
Winchester—
  High School.
  Shenandoah Valley Academy.
Woodberry Forest—*School.*
Woodlawn—High School.
Woodstock—
  High School.
  Massanutten Academy.
Wytheville—High School.

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[1] Provisionally accredired (for one year) by the Commission on Accredited Schools.

[2] Accredited provisionally (for one year) by State Board of Education and Commission on Accredited Schools, but not by the University.

[3] Accredited by university only.

Accredited by university and State Board of Education, but not by Commission on Accredited Schools.

The following girls' private secondary schools are accredited by the State Board of Education and the Commission on Accredited Schools:

Blackstone—*Female Institute.*
Buena Vista—*Southern Seminary.*
Charlottesville—*St. Anne's School.*
Chatham—*Episcopal Institute.*
Danville—
  Randolph-Macon Institute.
  Roanoke Institute.
Roanoke—*Virginia College for Women* (*Preparatory Department*).
Staunton—*Stuart Hall.*
Williamsburg—*Female Institute.*

The following colored private secondary schools are accredited by the State Board of Education:

Burkeville—*Ingleside Seminary.*
Chase City—*Thyne Institute.*
Lawrenceville—*St. Paul Normal and Industrial Institute.*
Lynchburg—*Virginia Theological Seminary and College.*
Richmond—
  Hartshorn Memorial College.
  Virginia Union University.

WASHINGTON.

Accredited by the State board of education and the University of Washington, October, 1915.

	Units.
University admission requirements	15
Prescribed units:	
English	3
Mathematics	2½
Foreign language	2
Science	1
A history (or United States history ½ and civics ½)	1
Foreign language 2 additional units, or	
Solid geometry ½ and 1 unit of science.	
Electives	3½ or 4

Aberdeen—High School.
Acme—High School.
Almira—High School.
Anacortes—High School.
Arlington—High School.
Asotin—High School.
Auburn—High School.
Bellingham (North)—High School.
Bellingham (South)—High School.
Bickleton—High School.
Black Diamond—High School.
Blaine—High School.
Bothwell—High School.
Bremerton-Charleston—High School.
Buckley—High School.
Burlington—Union High School.
Burton—Union High School.
Camas—High School.
Cashmere—High School.
Castle Rock—High School.
Centralia—High School.
Chehalis—High School.
Chelan—High School.
Cheney—High School.
Chewelah—High School.
Clarkston—High School.
Cle Elum—High School.
Colfax—High School.
Colville—High School.
Conconully—High School.
Coulee City—High School.
Coupeville—High School.
Creston—High School.
Davenport—High School.
Dayton—High School.
Deer Park—High School.
Eatonville—High School.
Edmonds—High School.
Edwall—High School.
Ellensburg—High School.
Elma—High School.
Endicott—High School.
Enumclaw—High School
Ephrata—High School.
Everett—High School.
Fairfield—High School.
Farmington—High School.
Ferndale—High School.
Friday Harbor—High School.
Garfield—High School.
Goldendale—High School.
Grandview—High School.
Granger—High School.
Granite Falls—High School.
Harrington—High School.
Hillyard—High School.
Hoquiam—High School.
Kalama—High School.
Kelso—High School.
Kennewick—High School.
Kent—High School.
Kettle Falls—High School.
Kirkland—High School.
Kittitas—High School.
La Conner—High School.
Latah—High School.
Laurel—High School.
Leavenworth—High School.
Lebam—High School.
Lind—High School.

Lynden—High School.
Mabton—High School.
Malden—High School.
Marysville—High School.
Medical Lake—High School.
Monroe—High School.
Montesano—High School.
Mossy Rock—High School.
Mount Vernon—High School.
Newport—High School.
Nooksack—High School.
North Bend—High School.
North Yakima—High School.
Oakesdale—High School.
Odessa—High School.
Okanogan—High School.
Olympia—High School.
Omak—High School.
Oroville—High School.
Orting—High School.
Outlook—High School.
Palouse—High School.
Pasco—High School.
Pe Ell—High School.
Pomeroy—High School.
Port Angeles—High School.
Port Townsend—High School.
Prescott—High School.
Prosser—High School.
Pullman—High School.
Puyallup—High School.
Raymond—High School.
Reardan—High School.
Renton—High School.
Republic—High School.
Richland—High School.
Ridgeville—High School.
Ritzville—High School.
Rockford—High School.
Rosalia—High School.
Roslyn—High School.
Roy—High School.
Seattle—
  Ballard High School.
  Broadway High School.
  Franklin High School.
  Holy Names Academy.
Seattle—Continued.
  Lincoln High School.
  Queen Anne High School.
  West Seattle High School.
Sedro Woolley—High School.
Selah—High School.
Shelton—High School.
Snohomish—High School.
South Bend—High School.
Spangle—High School.
Spokane—
  Holy Names Academy.
  Lewis and Clark High School.
  North Central High School.
Sprague—High School.
Stanwood—High School.
Stevenson—High School.
Sumas—High School.
Sumner—High School.
Sunnyside—High School.
Tacoma—
  Annie Wright Seminary.
  Lincoln Park High School.
  Stadium High School.
  University of Puget Sound (*Preparatory Department*).
Tekoa—High School.
Tenino—High School.
Tolt—High School.
Toppenish—High School.
Twisp—High School.
Vancouver—High School.
Vashon—High School.
Waitsburg—High School.
Walla Walla—
  High School.
  St. Paul's School for Girls.
Wapato—High School.
Washougal—High School.
Waterville—High School.
Wenatchee—High School.
White Salmon—High School.
Wilbur—High School.
Wilson Creek—High School.
Winlock—High School.
Winslow—High School.
Woodland—High School.

WEST VIRGINIA.

"First-class" secondary schools approved by the Department of Free Schools of West Virginia and accredited by West Virginia University, for the year 1915-16.[1]

	Units.
University admission requirements	15
Prescribed units:	
English	3
Mathematics	2
Foreign language (one)	2
Science	1
History	1
Electives	6

Athens—Concord State Normal School.
Barboursville—*Morris-Harvey College, Preparatory Department.*
Beckley—*Institute, High School Department.*
Belington—High School.
Benwood—Benwood-McMechen High School.
Bethany—*College, Preparatory School.*
Bluefield—Beaver Pond District High School.
Bramwell—Rock District High School.
Bridgeport—High School.
Buckhannon—
  High School.
  Wesleyan College, Preparatory School.
Cairo—Grant District High School.

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[1] The Department of Free Schools approves only the public high schools.

Cameron—Cameron District High School.
Ceredo—Ceredo-Kenova High School.
Charleston—
  High School.
  Garnett High School (colored).
Charles Town—Charles Town District High School.
Chester—High School.
Clarksburg—Washington Irving High School.
Clay—Clay County High School.
Clendenin—Big Sandy District High School.
Cowen—Glade District High School.
Davis—Davis District High School.
East Bank—Cabin Creek District High School.
Elkins—
  Davis-Elkins College, Preparatory School.
  High School.
Fairmont—
  High School.
  State Normal School.
Fairview—Paw Paw District High School.
Farmington—Lincoln District High School.
Flemington—Flemington District High School.
Glenville—State Normal School.
Grafton—High School.
Harpers Ferry—Harpers Ferry District High School.
Hillsboro—Little Levels District High School.
Hinton—Greenbrier District High School.
Huntington—
  Douglass High School (colored).
  High School.
  Marshall College, State Normal School.
Jane Lew—High School.
Keyser—
  High School.
  State Preparatory School.
Kingwood—Kingwood District High School.
Lewisburg—*Seminary.*
Littleton—Clay District High School.
Logan—Logan District High School.
Mannington—Mannington District High School.
Martinsburg—High School.
Middlebourne—Tyler County High School.
Montgomery—State Preparatory School.
Morgantown—High School.
Moundsville—High School.
Mount Hope—Fayetteville District High School.
New Martinsville—Magnolia District High School.
Nork Fork—North Fork-Elkhorn District High School.
Oak Hill—Fayetteville District High School No. 2.
Parkersburg—
  High School.
  Sumner High School (colored).
Parsons—Black Fork District High School.
Paw Paw—Cacapon District High School.
Pennsboro—Clay District High School.
Philippi—*Broaddus Institute, Preparatory School.*
Piedmont—Piedmont District High School.
Point Pleasant—High School.
Princeton—East River District High School.
Ravenswood—High School.
Richwood—High School.
Ronceverte—Fort Spring District High School.
St. Albans—High School.
St. Marys—Washington District High School.
Salem—
  College Preparatory School.
  High School.
Shepherdstown—Shepherd College State Normal School.
Sherrard—Union District High School.
Shinnston—Clay District High School.
Sistersville—High School.
Spencer—High School.
Summersville—Nicholas County High School.
Sutton—High School.
Terra Alta—Portland District High School.
Thomas—Fairfax District High School.
Webster Springs—Fork Lick District High School.
Welch—Browns Creek District High School.
Wellsburg—Wellsburg District High School.
West Liberty—State Normal School.
West Milford—Union District High School.
Weston—High School.
Wheeling—
  (Edgewood) Triadelphia District High School.
  High School.
  Lindsly Institute.
Williamson—High School.
Williamstown—Williams District High School.

WISCONSIN.

Accredited by the University of Wisconsin, August 1, 1915.

	Units.
Admission requirements	14
Prescribed units:	
English	2
Mathematics	2
Foreign language	2
Electives	8

Abbotsford—High School.
Albany—High School.
Algoma—High School.
Alma—High School.
Almond—High School.
Altoona—*St. Mary's Boarding and High School.*
Amery—High School.
Amherst—High School.
Antigo—High School.
Appleton—High School.
Arcadia—High School.
Arena—High School.
Argyle—High School.
Ashland—
  High School.
  Northland Academy.
Athens—High School.
Augusta—High School.
Baldwin—High School.
Bangor—High School.
Baraboo—High School.
Barron—High School.

Bayfield—High School.
Beaver Dam—
    High School.
    Wayland Academy.
Belleville—High School.
Belmont—High School.
Beloit—High School.
Berlin—High School.
Black Earth—High School.
Black River Falls—High School.
Blair—High School.
Blanchardville—High School.
Bloomer—High School.
Bloomington—High School.
Blue River—High School.
Boscobel—High School.
Brandon—High School.
Brillion—High School.
Brodhead—High School.
Brooklyn—High School.
Burlington—High School.
Cadott—High School.
Cambria—High School.
Cambridge—High School.
Camp Douglas—High School.
Cashton—High School.
Cassville—High School.
Cedarburg—High School.
Cedar Grove—*Wisconsin Memorial Academy.*
Chetek—High School.
Chilton—High School.
Chippewa Falls—
    High School.
    McDonell Memorial High School.
Clinton—High School.
Clintonville—High School.
Cobb—High School.
Colby—High School.
Columbus—High School.
Crandon—High School.
Cuba—High School.
Cumberland—High School.
Darien—High School.
Darlington—High School.
Deerfield—High School.
De Forest—High School.
Delafield—*St. John's Military Academy.*
Delavan—High School.
De Pere—High School.
Dodgeville—High School.
Durand—High School.
Eagle River—High School.
East Troy—High School.
Eau Claire—High School.
Edgar—High School.
Edgerton—High School.
Elkhorn—High School.
Ellsworth—High School.
Elroy—High School.
Endeavor—*Endeavor Academy.*
Evansville—
    Evansville Seminary.
    High School.
Fairchild—High School.
Fennimore—High School.
Fifield—High School.
Florence—High School.
Fond du Lac—
    Grafton Hall.
    High School.
    St. Mary's Springs Academy.
Fort Atkinson—High School.
Fountain City—High School.
Fox Lake—High School.
Frederic—High School.
Galesville—High School.
Genoa Junction—High School.
Gillett—High School.
Glenbeulah—High School.
Glenwood City—High School.
Goodman—High School.
Grafton—High School.
Grand Rapids—High School.
Grantsburg—High School.
Green Bay (East)—High School.
Green Bay (West)—
    High School.
    St. Joseph's Academy.
Green Lake—High School.
Greenwood—High School.
Hammond—High School.
Hancock—High School.
Hartford—High School.
Hayward—High School.
Hazel Green—High School.
Highland—High School.
Hillsboro—High School.
Hixton—High School.
Horicon—High School.
Hudson—
    Galahad, a School for Boys.
    High School.
Humbird—High School.
Hurley—High School.
Independence—High School.
Iola—High School.
Iron River—High School.
Janesville—High School.
Jefferson—High School.
Juneau—High School.
Kaukauna—High School.
Kendall—High School.
Kenosha—High School.
Kewaskum—High School.
Kewaunee—High School.
Kiel—High School.
Kilbourn—High School.
La Crosse—High School.
Ladysmith—High School.
La Farge—High School.
Lake Geneva—High School.
Lake Mills—High School.
Lancaster—High School.
Linden—High School.
Little Chute—High School.
Livingston—High School.
Lodi—High School.
Lone Rock—High School.
Loyal—High School.
Madison—
    High School.
    Sacred Heart Academy.
    The Wisconsin High School.
Manawa—High School.

Manitowoc—High School.
Marinette—High School.
Marion—High School.
Markesan—High School.
Marshall—High School.
Marshfield—High School.
Mattoon—High School.
Mauston—High School.
Mayville—High School.
Mazomanie—High School.
Medford—High School.
Mellen—High School.
Menasha—High School.
Menomonee Falls—High School.
Menomonie—High School.
Merrill—High School.
Merrillan—High School.
Middleton—High School.
Milton—
    High School.
    Milton College Academy.
Milton Junction—High School.
Milwaukee—
    East Division High School.
    German-English Academy.
    Holy Angels Academy.
    Milwaukee-Downer Seminary.
    North Division High School.
    Our Lady of Mercy High School.
    South Division High School.
    St. John's Cathedral School.
    Washington High School.
    West Division High School.
Mineral Point—High School.
Minocqua—High School.
Mondovi—High School.
Monroe—High School.
Montello—High School.
Montfort—High School.
Monticello—High School.
Mount Horeb—High School.
Mukwonago—High School.
Muscoda—High School.
Necedah—High School.
Neenah—High School.
Neillsville—High School.
New Holstein—High School.
New Lisbon—High School.
New London—High School.
New Richmond—High School.
North Crandon—High School.
North Fond du Lac—High School.
Oakfield—High School.
Oconomowoc—High School.
Oconto—High School.
Oconto Falls—High School.
Omro—High School.
Onalaska—High School.
Oregon—High School.
Osceola—High School.
Oshkosh—High School.
Palmyra—High School.
Pardeeville—High School.
Park Falls—High School.
Pepin—High School.
Peshtigo—High School.
Pewaukee—High School.
Phillips—High School.
Plainfield—High School.
Platteville—High School.
Plymouth—High School.
Portage—High School.
Port Washington—High School.
Poynette—High School.
Prairie du Chien—
    High School.
    Keewatin Academy.
    St. Mary's Academy.
Prairie du Sac—High School.
Prentice—High School.
Prescott—High School.
Princeton—High School.
Racine—
    College Grammar School.
    High School.
    St. Catherine's Academy.
Randolph—High School.
Redgranite—High School.
Reedsburg—High School.
Reeseville—High School.
Rhinelander—High School.
Rib Lake—High School.
Rice Lake—High School.
Richland Center—High School.
Rio—High School.
Ripon—High School.
River Falls—High School.
Roberts—High School.
Rosendale—High School.
St. Croix Falls—High School.
St. Francis—*Pio Nono College* (*High School Course*).
Sauk City—High School.
Seneca—High School.
Seymour—High School.
Sharon—High School.
Shawano—High School.
Sheboygan—High School.
Sheboygan Falls—High School.
Shell Lake—High School.
Shiocton—High School.
Shullsburg—High School.
Sinsinawa—*St. Clara Academy.*
Soldiers Grove—High School.
South Milwaukee—High School.
Sparta—High School.
Spooner—High School.
Spring Green—High School.
Spring Valley—High School.
Stanley—High School.
Stevens Point—High School.
Stoughton—High School.
Stratford—High School.
Sturgeon Bay—High School.
Sun Prairie—High School.
Superior—
    High School.
    Nelson Dewey High School.
Thorp—High School.
Tigerton—High School.
Tomah—High School.
Tomahawk—High School.
Trempealeau—High School.
Two Rivers—High School.
Union Grove—High School.

Unity—High School.
Verona—High School.
Viola—High School.
Viroqua—High School.
Wabeno—High School.
Waldo—High School.
Walworth—High School.
Washburn—High School.
Waterford—High School.
Waterloo—High School.
Watertown—High School.
Waukesha—High School.
Waunakee—High School.
Waupaca—High School.
Waupun—High School.
Wausau—High School.
Wausaukee—High School.
Wautoma—High School.
Wauwatosa—
  High School.
  Milwaukee County Agricultural School.
West Allis—High School.
West Bend—High School.
Westboro—High School.
Westby—High School.
West De Pere—High School.
Westfield—High School.
West Salem—High School.
Weyauwega—High School.
Whitehall—High School.
Whitewater—High School.
Wild Rose—High School.
Wilmot—High School.
Wilton—High School.
Winneconne—High School.
Wittenberg—High School.
Wonowoc—High School.

WYOMING.

Accredited by the University of Wyoming, November, 1915.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2
Foreign language	2
History	2
Science	1
Electives	5

Afton—High School.
Basin—High School.
Buffalo—High School.
Casper—High School.
Cheyenne—
  Convent of the Holy Child Jesus.
  High School.
Cody—High School.
Cowley—*Big Horn Stake Academy.*
Douglas—High School.
Evanston—High School.
Gillette—High School.
Green River—High School.
Kemmerer—High School.
Lander—High School.
Laramie—
  High School.
  University High School.
Lusk—High School.
Newcastle—High School.
Powell—High School.
Rawlins—High School.
Riverton—High School.
Rock Springs—High School.
Sheridan—High School.
Sundance—High School.
Thermopolis—High School.
Torrington—High School.
Wheatland—High School.
Worland—High School.

PART II.—LISTS OF ACCREDITING ASSOCIATIONS.

The Commission on Accredited Schools of the Association of Colleges and Secondary Schools of the Southern States.

The minimum standard for accrediting shall be:

(*a*) No school shall be accredited which does not require for graduation the completion of a four-year high-school course of study embracing 14 units as defined by this association. A unit represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work. More than 20 periods per week should be discouraged.

(*b*) The minimum scholastic attainment of three-fourths of all secondary school teachers of academic subjects in any accredited school on the southern list shall be equivalent to graduation from a college belonging to the Association of Colleges and Secondary Schools of the Southern States, or a college approved by the commission. It is strongly advised that this attainment include, or be supplemented by, special study of the content and pedagogy of the subject taught.

(*c*) The number of daily periods of class instruction given by any teacher should not exceed five periods per day; and the commission will scrutinize with extreme care any school in which instructors teach as many as six daily periods.

(*d*) The laboratory and library facilities shall be adequate for the needs of instruction in the courses taught.

(*e*) The location and construction of the buildings, the lighting, heating, and ventilation of the rooms, the nature of the lavatories, corridors, water supply, school furniture, apparatus, and methods of cleaning shall be such as to insure hygienic conditions for both pupils and teachers.

(*f*) The efficiency of instruction, the acquired habits of thought and speech, the general intellectual and moral tone of a school are paramount factors, and therefore, only schools which rank well in these particulars, as evidenced by rigid, thoroughgoing, sympathetic inspection, shall be considered eligible for the list.

(*g*) The commission will decline to consider any school whose teaching force consists of fewer than three teachers of academic subjects giving their full time to high-school instruction. When local conditions warrant the introduction of the so-called vocational subjects, such as agriculture, manual training, household arts, and commercial subjects, the commission will hold that a sufficient number of teachers and proper equipment must be added to provide adequately for such instruction.

* * * * * * *

(*i*) All schools whose records show an excessive number of pupils per teacher, as based on the average number belonging, even though they may technically meet all other requirements, will be rejected. The association recognizes 30 as maximum.

Schools accredited for the year 1915-16.

ALABAMA.

Andalusia—High School.
Athens—*Greene University School.*
Birmingham—
    Birmingham College Training School.
    Central High Schoool.
    Ensley High School.
    Howard Academy.
Centreville—Bibb County High School.
Decatur—High School.
Eufaula—High School.
Gadsden—Disque High School.
Huntsville—High School.
Jasper—Walker County High School.
Mobile—
    High School.
    University Military School.
Montgomery—
    Barnes School.
    Sidney Lanier High School.
New Decatur—High School.
Selma—High School.
Talladega—High School.
Tuscaloosa—High School.
Union Springs—High School.

ARKANSAS.

Argenta—High School.
Camden—High School.
Crossett—High School.
Dermott—High School.
England—High School.
Eureka Springs—*Crescent College Academy.*
Forrest City—High School.
Hot Springs—High School.
Little Rock—High School.
Stuttgart—High School.
Texarkana—High School.

FLORIDA.

- Arcadia—De Soto County High School.
- Bartow—Summerlin Institute.
- Bradentown—Manatee County High School.
- Brooksville—Hernando County High School.
- Clearwater—High School.
- Daytona—High School.
- De Funiak Springs—*Palmer College Academy.*
- Eustis—High School.
- Fort Lauderdale—High School.
- Fort Myers—Gwynne High School.
- Gainesville—High School.
- Jacksonville—*Florida Military Academy.*
- Kissimmee—Osceola County High School.
- Lakeland—High School.
- Largo—High School.
- Leesburg—High School.
- Live Oak—Suwannee County High School.
- Miami—High School.
- Ocala—High School.
- Pensacola—High School.
- Plant City—High School.
- Punta Gorda—High School.
- Quincy—Gadsden County High School.
- St. Petersburg—High School.
- Sanford—High School.
- Tallahassee—Leon High School.
- Tampa—Hillsborough County High School.
- Tarpon Springs—High School.
- Wauchula—High School.
- West Palm Beach—High School.

GEORGIA.

- Albany—High School.
- Athens—High School.
- Atlanta—
  - Boys' High School.
  - Girls' High School.
  - *Marist College.*
  - *Peacock's School.*
- Augusta—
  - Richmond Academy.
  - Tubman High School.
- Barnesville—*Gordon Institute.*
- Brunswick—*Glynn Academy.*
- Cartersville—High School.
- Cedartown—High School.
- Columbus—High School.
- College Park—*Georgia Military Academy.*
- Dublin—High School.
- Elberton—High School.
- Fitzgerald—High School.
- Fort Valley—High School.
- Gainesville—*Riverside Military Academy.*
- Greensboro—High School.
- Griffin—High School.
- Locust Grove—*Institute.*
- Madison—High School.
- Marietta—High School.
- Milledgeville—Georgia Military Academy.
- Newnan—High School.
- Quitman—High School.
- Rome—
  - *Darlington Academy.*
  - High School.
- Savannah—
  - *Benedictine College.*
  - *Chatham Academy.*
- Thomaston—*R. E. Lee Institute.*
- Thomasville—High School.
- Valdosta—High School.
- Waycross—High School.

KENTUCKY.

- Ashland—High School.
- Catlettsburg—High School.
- Covington—High School.
- Cynthiana—High School.
- Dayton—High School.
- Elkton—*Vanderbilt Training School.*
- Frankfort—High School.
- Franklin—High School.
- Georgetown—High School.
- Henderson—High School.
- Lexington—High School.
- Louisville—
  - Boys' High School.
  - Girls' High School.
- Ludlow—High School.
- Lyndon—*Kentucky Military Institute.*
- Maysville—High School.
- Morganfield—High School.
- Mount Sterling—High School.
- Newport—
  - Bellevue High School.
  - High School.
- Owensboro—High School.
- Paducah—High School.
- Paris—High School.
- Richmond—Kentucky State Normal.
- Stanford—High School.
- Sturgis—High School.

LOUISIANA.

- Alexandria—Bolton High School.
- Baton Rouge—State University Demonstration School.
- Homer—High School.
- Houma—Terrebonne High School.
- Monroe—Ouachita Parish High School.
- New Orleans—*Isidore Newman Manual Training School.*
- Shreveport—High School.

MISSISSIPPI.

Clarksdale—High School.
Greenville—High School.
Greenwood—High School.
Gulfport—High School.
Jackson—Central High School.
Laurel—High School.
McComb—High School.
Meridian—High School.
Natchez—High School.
Port Gibson—*Chamberlain-Hunt Academy.*

NORTH CAROLINA.

Asheville—
- *Asheville School.*
- *Bingham School.*
- High School.
- *St. Genevieve's Academy.*

Charlotte—
- High School.
- *Horner Military School.*

Durham—
- High School.
- *Trinity Park School.*

Elizabeth City—High School.
Flat Rock—*Fleet School.*
Goldsboro—High School.
Hendersonville—*Fassifern School.*
Oak Ridge—*Institute.*
Raleigh—High School.
Warrenton—High School.
Wilmington—High School.
Winston-Salem—
- High School.
- *Salem Academy.*

SOUTH CAROLINA.

Anderson—High School.
Bamberg—
- *Carlisle Fitting School.*
- High School.

Bennettsville—High School.
Charleston—
- *Ashley Hall School.*
- High School (Boys).
- *Porter Military Academy.*

Darlington—High School.
Dillon—High School.
Florence—High School.
Greenville—*Furman Fitting School.*
Greenwood—High School.
Lancaster—High School.
Latta—High School.
Marion—High School.
North Augusta—High School.
Orangeburg—High School.
St. Matthews—High School.
Spartanburg—*Wofford Fitting School.*
Summerville—High School.
Sumter—High School.

TENNESSEE.

Benton—Polk County High School.
Chattanooga—
- *Baylor School.*
- *Girls Preparatory School*
- High School.
- *McCallie School.*

Columbia—*Military Academy.*
Concord—Farragut High School.
Covington—Byars-Hall High School.
Dyersburg—High School (County).
Fountain City—Knox County Central High School.
Knoxville—High School.
Park City—High School.
Maryville—*Maryville College (Preparatory Department).*
Memphis—
- High School.
- *University School.*

Nashville—
- Hume-Fogg High School.

Paris—Grove High School.
Pulaski—
- *Martin College (Preparatory Department.)*
- *Massey School.*

Sewanee—*Sewanee Military Academy.*
Tullahoma—*Fitzgerald and Clarke School.*

TEXAS.

Abilene—High School.
Amarillo—High School.
Austin—
- High School.
- *Whitis School.*

Ballinger—High School.
Beaumont—High School.
Belton—High School.
Bonham—High School.
Brady—High School.
Cameron—High School.
Center—High School.
Clarksville—High School.
Cleburne—High School.
Corsicana—High School.
Dallas—
- Main High School.
- Oak Cliff High School.

El Paso—High School.
Ennis—High School.
Farmersville—High School.
Forney—High School.
Fort Worth—High School.
Gainesville—High School.
Galveston—Ball High School.
Greenville—High School.

Henderson—High School.
Hillsboro—High School.
Houston—High School.
Houston Heights—High School.
Longview—High School.
Lufkin—High School.
Marlin—High School.
Marshall—High School.
McGregor—High School.
Mineola—High School.
Nacogdoches—High School.
Palestine—High School.
Pittsburg—High School.
Port Arthur—High School.
Quanah—High School.
San Angelo—High School.
San Antonio—*Academy.*
San Benito—High School.
San Marcos—*Baptist Academy.*
Seguin—High School.
Stamford—High School.
Sweetwater—High School.
Temple—High School.
Victoria—High School.
Waco—High School.
Waxahachie—High School.
Wichita Falls—High School.

VIRGINIA.

Alexandria—
  Episcopal High School.
  High School.
Bedford—*Randolph-Macon Academy.*
Bristol—High School.
Charlottesville—High School.
Cluster Springs—*Academy.*
Danville—*The Danville School.*
Front Royal—*Randolph-Macon Academy.*
Harrisonburg—High School.
Lexington—High School.
Lynchburg—High School.
Manassas—High School.
Norfolk—Maury High School.
Petersburg—High School.
Portsmouth—High School.
Richmond—
  Academy.
  John Marshall High School.
  McGuire's University School.
Roanoke—High School.
South Boston—High School.
Staunton—High School.
Suffolk—Jefferson High School.
Winchester—*Shenandoah Valley Academy.*
Woodberry Forest—*School.*
Woodstock—*Massanutten Academy.*
Wytheville—High School.

WEST VIRGINIA.

Beckley—*Institute.*
Benwood—Union High School.
Buckhannon—*West Virginia Wesleyan Academy.*
Cairo—Grant District High School.
Ceredo—Ceredo-Kenova High School.
Charleston—High School.
Clarksburg—High School.
Clay—High School (county).
East Bank—Cabin Creek District High School.
Fairview—Paw Paw District High School.
Farmington—High School.
Hillsboro—High School.
Hinton—High School.
Keyser—State Preparatory School.
Logan—District High School.
Mannington—High School.
Martinsburg—High School.
Moundsville—High School.
Mount Hope—High School.
New Martinsville—Magnolia High School.
Oak Hill—High School.
Parkersburg—High School.
Princeton—East River District High School.
St. Marys—High School.
Shinnston—Clay District High School.
Spencer—High School.
Summerville—Nicholas County High School.
Thomas—High School.
Welch—Brown's Creek District High School.
Weston—High School.
Wheeling—(Edgewood) Triadelphia District High School.
Williamson—High School.
Williamstown—High School.

New England College Entrance Certificate Board.

Members of the board: Amherst College, Bates College, Boston University, Bowdoin College, Brown University, Colby College, Massachusetts Agricultural College, Middlebury College, Mount Holyoke College, Smith College, Tufts College, University of Vermont, Wellesley College, Wesleyan University, Williams College.

A school to be approved by the board must—

(1) Give satisfactory evidence as to curriculum, staff of teachers, and equipment;

(2) Be able to prepare for college according to some one of the recognized plans for entering a college represented on the board;

* * * * * * *

(4) Have sent on examination within a period of three years preceding the time of application at least two students to one or more of the colleges represented on the board.

A school when first approved is placed on a trial list. If the record made by its candidates in the colleges represented on the board is satisfactory, it is then placed on the approved list.

Schools approved by the board, May 20, 1915.

CONNECTICUT.

- Ansonia—High School.
- Bridgeport—
  - *Courtland School.*
  - High School.
- Bristol—High School.[1]
- Central Village—Plainfield High School.
- Cheshire—*School.*
- Clinton—*Morgan School.*
- Collinsville—High School.
- Danbury—High School.
- Danielson—Killingly High School.
- Derby—High School.
- East Hartford—High School.
- Greenwich—
  - *Academy.*
  - High School.
  - *Rosemary Hall School.*
- Hartford—Public High School.
- Lakeville—*Taconic School for Girls.*
- Meriden—High School.
- Middlebury—*Westover School.*
- Middletown—
  - High School.
  - *The Misses Patten's School.*
- New Britain—Public High School.
- New Haven—High School.
- New London—
  - *Bulkeley School.*
  - *Williams Memorial Institute.*
- New Milford—High School.
- Newtown—High School.
- North Stonington—*Wheeler School.*[1]
- Norwalk—*Hillside School.*
- Norwich—*Free Academy.*
- Portland—High School.
- Putnam—High School.
- Redding—*Sanford School.*[1]
- Ridgefield—*School.*[1]
- Seymour—High School.[1]
- Shelton—High School.
- Southington—Lewis High School.
- South Manchester—High School.
- South Norwalk—Norwalk High School.
- Stamford—
  - High School.
  - *The Catherine Aiken School.*
  - *The Stamford Preparatory School.*
- Stonington—High School.
- Stratford—High School.[1]
- Suffield—*Connecticut Literary Institution.*
- Thompsonville—Enfield Public High School.
- Vernon—Rockville High School.
- Wallingford—
  - Central District High School.
  - *The Choate School.*
- Washington—
  - *The Gunnery School.*
  - *Wykeham Rise.*
- Waterbury—
  - Crosby High School.
  - *St. Margaret's School.*
- Watertown—*The Taft School.*
- West Hartford—High School.
- West Haven—High School.[1]
- Willimantic—Windham High School.
- Windsor—High School.
- Winsted—*Gilbert School.*

MAINE.

- Auburn—Edward Little High School.
- Augusta—Cony High School.
- Bangor—High School.
- Bar Harbor—High School.
- Bath—Morse High School.
- Belfast—High School.
- Berwick—Sullivan High School.[1]
- Bethel—*Gould's Academy.*
- Biddeford—High School.
- Bluehill—*Bluehill George Stevens Academy.*
- Bowdoinham—High School.[1]
- Brewer—High School.
- Bridgton—High School.
- Brunswick—High School.
- Buckfield—High School.[1]
- Bucksport—*East Maine Conference Seminary.*
- Calais—*Academy.*
- Camden—High School.
- Caribou—High School.[1]
- Charleston—*Higgins Classical Institute.*
- Cherryfield—*Academy.*[1]
- Cumberland Center—*Greeley Institute.*
- Dexter—High School.
- East Livermore—Livermore Falls High School.
- East Machias—*Washington Academy.*
- Eastport—Boynton High School.
- Ellsworth—High School.
- Fairfield—Lawrence High School.[1]
- Farmington—
  - *The Abbot School.*
  - High School.
- Fort Fairfield—High School.
- Foxcroft—*Academy.*
- Freedom—*Academy.*
- Freeport—High School.
- Fryeburg—*Academy.*
- Gardiner—High School.[1]
- Gorham—High School.
- Guilford—High School.
- Hallowell—High School.
- Hampden—*Academy.*
- Hebron—*Academy.*
- Hinckley—*Good Will High School.*[1]
- Houlton—
  - High School.
  - *Ricker Classical Institute.*
- Kennebunkport—High School.[1]
- Kents Hill—*Maine Wesleyan Seminary.*
- Lewiston—High School.
- Lisbon Falls—High School.
- Machias—High School.[1]
- Madison—High School.

[1] On the trial list for 1915.

Milo—High School.[1]
Newcastle—*Lincoln Academy.*
North Bridgton—*Bridgton Academy.*
Norway—High School.
Old Town—High School.
Oxford—High School.
Phillips—High School.[1]
Pittsfield—*Maine Central Institute.*
Portland—
  Deering High School.
  High School.
  Waynflete School.
  Westbrook Seminary.
Presque Isle—High School.
Richmond—High School.
Rockland—High School.
Rockport—High School.[1]
Rumford—Stephens High School.
Saco—*Thornton Academy.*
Sanford—High School.[1]
Skowhegan—Skowhegan High School and Bloomfield Academy.
South Berwick—*Berwick Academy.*[1]
South Paris—Paris High School.
South Portland—High School.
Thomaston—High School.[1]
Topsham—High School.[1]
Vassalboro—*Oak Grove Seminary.*
Warren—High School.[1]
Waterville—
  Coburn Classical Institute.
  High School.
Wells—High School.
Westbrook—High School.
Wilton—*Academy.*
Winthrop—High School.[1]
York—High School.

MASSACHUSETTS.

Abington—High School.
Adams—High School.
Amherst—High School.
Andover—
  Abbot Academy.
  Phillips Academy.
  Punchard High School.
Arlington—High School.
Ashburnham—*Cushing Academy.*
Ashland—High School.
Athol—High School.
Attleboro—High School.
Auburndale—*Lasell Seminary.*
Ayer—High School.
Barre—Henry Woods High School.
Belmont—High School.
Boston—
  Berkeley Preparatory School.
  Brighton High School.
  The Brimmer School.
  The Curtis-Peabody School.[1]
  Dorchester High School.
  East Boston High School.
  English High School.
  Girls' High School.
  Girls' Latin School.
  Miss Guild's and Miss Evans's School.
  Huntington School.
  Mechanics Arts High School.
  Public Latin School.
  Roxbury High School.
  South Boston High School.
  The von Mach School for Girls.[1]
  West Roxbury High School.
  The Winsor School.[1]
Bradford—*Academy.*
Bridgewater—High School.
Brimfield—*Hitchcock Free Academy.*[1]
Brockton—High School.
Brookline—High School.
Cambridge—High and Latin School.
Chelsea—High School.
Chicopee—High School.
Clinton—High School.
Concord—High School.
Dalton—High School.
Danvers—Holten High School.
Dedham—High School.
Deerfield—Academy and Dickinson High School.
Duxbury—*Powder Point School.*[1]
Easthampton—
  High School.
  Williston Seminary.
East Northfield—*Northfield Seminary.*
East Weymouth—Weymouth High School.
Everett—High School.
Fairhaven—High School.
Fall River—B. M. C. Durfee High School.
Falmouth—Lawrence High School.
Fitchburg—High School.
Foxboro—High School.
Framingham—High School.
Franklin—*Dean Academy.*
Gardner—High School.
Georgetown—*Perley Free School.*[1]
Gloucester—High School.
Grafton—High School.
Great Barrington—Searles High School.[1]
Greenfield—High School.
Groveland—High School.
Hadley—Hopkins Academy.
Hatfield—*Smith Academy.*
Haverhill—High School.
Hingham—High School.
Holliston—High School.
Holyoke—High School.
Hudson—High School.
Hyannis—Barnstable High School.[1]
Hyde Park—High School.
Lawrence—High School.
Lee—High School.
Leicester—*Academy.*
Lenox—High School.[1]
Leominster—High School.
Lexington—High School.
Littleton—High School.[1]
Lowell—
  High School.
  Rogers Hall School.

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[1] On the trial list for 1915.

Lynn—
    Classical High School.
    English High School.
Malden—High School.
Manchester—Story High School.
Mansfield—High School.
Marblehead—High School.
Marion—*Tabor Academy.*
Marlborough—High School.
Marshfield—High School.[1]
Maynard—High School.
Medford—High School.
Melrose—High School.
Methuen—High School.
Middleboro—High School.
Milford—High School.
Milton—High School.
Monson—*Academy.*
Mount Hermon—*Boys' School.*
Natick—
    High School.
    Walnut Hill School for Girls.
Needham—High School.
New Bedford—High School.
Newburyport—High and Putnam Schools.
Newton—*Mount Ida School for Girls.*
Newtonville—
    Newton High School.
    Technical High School.
North Adams—Drury High School.
Northampton—
    Miss Capen's School for Girls.
    High School.
    The Mary A. Burnham School for Girls.
    St. Michael's High School.
North Andover—Johnson High School.
North Attleboro—High School.[1]
North Brookfield—High School.
Norton—High School.
Norwood—High School.
Orange—High School.
Palmer—High School.
Peabody—High School.
Pepperell—High School.
Pittsfield—
    Miss Hall's School.
    High School.
Plymouth—High School.
Provincetown—High School.
Quincy—
    High School.
    Woodward Institute.
Revere—High School.
Rockland—High School.
Salem—Classical and High School.
Sandwich—High School.
Saugus—High School.
Scituate—High School.
Sharon—High School.
Sheffield—*Berkshire School.*[1]
Shelburne—Arms Academy.
Somerville—High School.
South Braintree—*Thayer Academy.*
Southbridge—High School.
South Byfield—*Dummer Academy.*
Springfield—
    American International College.
    Central High School.
    The Elms.
    The MacDuffee School for Girls.
    Technical High School.
Stoneham—High School.
Stoughton—Kimball High School.
Stow—Hale High School.[1]
Sudbury—High School.[1]
Swampscott—High School.
Taunton—High School.
Turners Falls—High School.
Upton—High School.
Uxbridge—High School.
Wakefield—High School.
Waltham—High School.
Ware—High School.
Wareham—High School.
Warren—High School.
Webster—High School.
Wellesley—
    Dana Hall School.
    High School.
Westboro—High School.[1]
West Bridgewater—Howard High School.
Westfield—High School.
Westford—Academy.[1]
Weston—High School.[1]
West Springfield—High School.
Whitinsville—Northbridge High School.
Whitman—Public High School.
Wilbraham—*Academy.*
Williamsburg—High School.[1]
Williamstown—High School.
Winchendon—Murdock School.
Winchester—High School.
Winthrop—High School.
Woburn—High School.
Wollaston—*Quincy Mansion School.*
Worcester—
    Academy.
    Classical High School.
    English High School.
    South High School.
Wrentham—High School.

NEW HAMPSHIRE.

Andover—*Proctor Academy.*
Berlin—High School.
Claremont—Stevens High School.
Concord—
    High School.
    St. Mary's School.
    St. Paul's School.
Derry—*Pinkerton Academy.*
Exeter—
    Phillips Exeter Academy.
    Robinson Seminary.
Franklin—High School.
Hanover—High School.
Hillsboro—High School.[1]

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[1] On the trial list for 1915.

- Hollis—High School.[1]
- Keene—High School.
- Kingston—*Sanborn Seminary.*
- Laconia—High School.
- Lancaster—High School.
- Lebanon—High School.
- Lisbon—High School.
- Littleton—High School.
- Manchester—High School.
- Meriden—*Kimball Union Academy.*
- Milford—High School.
- Milton—Nute High School.
- Nashua—High School.
- New Hampton—*Literary Institution.*
- New London—*Colby Academy.*
- Newport—Richards High School.
- Pittsfield—High School.
- Plymouth—High School.
- Portsmouth—High School.
- Rochester—High School.
- Somersworth—High School.
- Stratford—High School.
- Tilton—*Seminary.*
- Warner—Simons Free High School.
- Whitefield—High School.[1]
- Wolfeboro—*Brewster Free Academy.*

RHODE ISLAND.

- Barrington—High School.
- Bristol—Colt Memorial High School.
- Central Falls—High School.
- East Greenwich—*Academy.*
- East Providence—High School.
- Newport—Rogers High School.
- Pawtucket—High School.
- Providence—
  - Classical High School.
  - Cranston High School.
  - English High School.
- Providence—Continued.
  - Hope Street High School.
  - *Miss Wheeler's School.*
  - Morris Heights School.[1]
  - *Moses Brown School.*
  - Technical High School.
- Wakefield—South Kingstown High School.
- Warwick—High School.
- Westerly—High School.
- Wickford—North Kingstown High School.
- Woonsocket—High School.

VERMONT.

- Barre—
  - *Goddard Seminary.*
  - Spaulding High School.
- Barton—Academy.
- Bellows Falls—High School.
- Bennington—High School.
- Bethel—Whitcomb High School.
- Bradford—Academy.
- Brandton—High School.
- Brattleboro—High School.
- Bristol—High School.[1]
- Burlington—
  - High School.
  - *Mount St. Mary's Academy.*[1]
- Chester—High School.
- Enosburg Falls—High School.[1]
- Essex—Essex Junction High School.
- Farifax—*Bellows Free Academy.*
- Fair Haven—High School.
- Hardwick—Academy.
- Hyde Park—High School.[1]
- Jericho—High School.
- Johnson—High School.
- Ludlow—Black River Academy.
- Lyndon Center—*Lyndon Institute.*
- Manchester—*Burr and Burton Seminary.*
- Middlebury—High School.
- Montpelier—
  - High School.
  - *Seminary.*
- Morrisville—People's Academy.
- Newport—High School.
- North Craftsbury—*Craftsbury Academy.*
- Orleans—High School.[1]
- Pittsford—High School.[1]
- Poultney—*Troy Conference Academy.*
- Proctor—High School.
- Randolph—High School.
- Richford—High School.
- Rutland—High School.
- St. Albans—High School.
- St. Johnsbury—*Academy.*
- Saxtons River—*Vermont Academy.*
- South Royalton—High School.
- Springfield—High School.
- Stowe—High School.
- Townshend—*Leland and Gray Seminary.*
- Vergennes—High School.
- Waterbury—High School.
- White River Junction—Hartford High School.
- Winooski—High School.[1]
- Woodstock—High School.

[1] On the trial list for 1915.

North Central Association of Colleges and Secondary Schools.

The following constitute the standards for accrediting secondary schools for the present year (1915).

1. No school shall be accredited which does not require 15 units for graduation. More than 20 periods per week should be discouraged.

2. The minimum attainment of teachers of academic subjects shall be equivalent to graduation from a college belonging to the North Central Association of Colleges and Secondary Schools requiring the completion of a four-year course of study, or 120 semester hours in advance of a standard four-year high-school

course and including at least 11 semester hours in education. This shall include special study of the subject matter and pedagogy of the subject to be taught. Such requirements shall not be construed as retroactive. (For the succeeding year the board will interpret courses in education as the same courses are interpreted by the colleges or universities offering them, not more than six hours' credit being given for successful teaching experience.)

3. The number of daily periods of classroom instruction given by any teacher should not exceed 5, each to extend over at least 40 minutes in the clear. The board of inspectors will reject all schools having more than 6 recitation periods per day for any teacher.

4. The laboratory and library facilities shall be adequate to the needs of instruction in the subjects taught.

5. The location and construction of the buildings, the lighting, heating, and ventilation of the rooms, the nature of the lavatories, corridors, closets, water supply, school furniture, apparatus, and methods of cleaning shall be such as to insure hygienic conditions for both pupils and teachers.

6. The efficiency of instruction, the acquired habits of thought and study, the general intellectual and moral tone of a school are paramount factors, and therefore only schools which rank well in these particulars, as evidenced by rigid, thoroughgoing, sympathetic inspection, shall be considered eligible for the list.

7. The association will decline to consider any school whose teaching force consists of fewer than four teachers of academic subjects, exclusive of the superintendent. The association recommends the introduction of the so-called vocational subjects, such as agriculture, manual training, household arts, and commercial subjects, into schools where local conditions render such introduction feasible, but the inspectors will hold that a sufficient number of qualified teachers must be added to provide adequately for such instruction.

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9. No school whose records show an excessive number of pupils per teacher, based on average attendance, shall be accredited. The association recommends 25 as a maximum.

Schools accredited March 20, 1915.

COLORADO.

Aspen—High School.
Boulder—Colorado State Preparatory School.
Canon City—
  High School.
  South Canon City High School.
Colorado City—High School.
Colorado Springs—High School.
Cripple Creek—High School.
Delta—High School.
Denver—
  East Side High School.
  Manual Training High School.
  North Side High School.
  South Side High School.
  West Side High School.
Durango—High School.
Eaton—High School.
Fort Collins—High School.
Fort Morgan—High School.
Fruita—High School.
Glenwood Springs—Garfield County High School.
Golden—High School.
Grand Junction—High School.
Greeley—High School.
Gunnison—County High School.
Lamar—High School.
Las Animas—Bent County High School.
La Junta—High School.
Leadville—High School.
Longmont—High School.
Loveland—High School.
Monte Vista—High School.
Montrose—County High School.
Pueblo—
  High School (District 1).
  High School (District 20).
Rocky Ford—High School.
Salida—High School.
Telluride—High School.
Trinidad—High School.
Victor—High School.

ILLINOIS.

Aledo—*Drury Academy.*
Alton—
  High School.
  Western Military Academy.
Aurora—
  East High School.
  Jennings Seminary.
  West High School.
Batavia—High School.
Beardstown—High School.
Belleville—High School.
Belvidere—High School.
Bloomington—High School.
Blue Island—High School (Township).
Bridgeport—High School (Township).
Cairo—High School.
Canton—High School.
Carbondale—
  High School.
  Southern Illinois State Normal University.
Carlinville—High School.
Carthage—*College Academy.*
Centralia—High School (Township).
Champaign—High School.
Charleston—High School.
Chicago—
  Austin High School.
  Bowen High School.

- Chicago—Continued.
  - Calumet High School.
  - Carl Schurz High School.
  - Crane Technical High School.
  - Curtis High School.
  - Englewood High School.
  - *F. W. Parker School.*
  - Harrison Technical High School.
  - *Harvard School.*
  - Hyde Park High School.
  - *Kenwood Institute.*
  - Lake High School.
  - Lake View High School.
  - Lane Technical High School.
  - *Latin School.*
  - *Loyola Academy.*
  - Lucy Flower Technical High School.
  - Marshall High School.
  - McKinley High School.
  - Medill High School.
  - *Morgan Park Academy.*
  - Morgan Park High School.
  - Phillips High School.
  - Senn High School.
  - Tuley High School.
  - *University High School.*
  - Waller High School.
- Chicago Heights—Bloom Township High School.
- Cicero—J. Sterling Morton Township High School.
- Clinton—High School.
- Collinsville—High School (Township).
- Danville—High School.
- Decatur—High School.
- De Kalb—High School (Township).
- Des Plaines—Maine Township High School.
- Dixon—
  - High School.
  - North High School.
- Downers Grove—High School.
- Dundee—High School.
- Duquoin—High School (Township).
- East St. Louis—High School.
- Edwardsville—High School.
- Elgin—
  - *Academy.*
  - High School.
- Elmhurst—*Evangelical Proseminar.*
- Evanston—
  - *Academy.*
  - High School (Township).
- Farmer City—Moore Township High School.
- Freeport—High School.
- Galesburg—High School.
- Galva—High School.
- Geneseo—High School (Township).
- Geneva—High School.
- Gibson City—Drummer Township High School.
- Godfrey—*Monticello Seminary.*
- Granite City—High School.
- Harrisburg—High School (Township).
- Harvard—High School.
- Harvey—Thornton Township High School.
- Highland Park—
  - Deerfield Township High School.
  - *Northwestern Military Academy.*
- Hinsdale—High School (Township).
- Hoopeston—High School.
- Jacksonville—
  - High School.
  - *Illinois Women's College Academy.*
  - *Whipple Academy.*
- Joliet—High School (Township).
- Kankakee—High School.
- Kenilworth—New Trier Township High School.
- Kewanee—High School.
- La Grange—Lyons Township High School.
- Lake Forest—
  - *Academy.*
  - *Ferry Hall.*
- La Salle—La Salle-Peru Township High School.
- Lawrenceville—High School (Township).
- Lincoln—High School.
- Lockport—High School (Township).
- Lovington—High School (Township).
- Macomb—
  - Academic Department of Normal School.
  - High School.
- Marengo—High School.
- Marshall—High School (Township).
- Mattoon—High School.
- Maywood—Proviso Township High School.
- Moline—High School.
- Monmouth—High School.
- Morris—High School.
- Morrison—High School.
- Mount Carmel—High School.
- Mount Carroll—*Frances Shimer School.*
- Mount Vernon—High School (Township).
- Murphysboro—High School (Township).
- Naperville—
  - High School.
  - *Northwestern College Academy.*
- Normal—High School.
- Normal University—High School.
- Oak Park—Oak Park and River Forest Township High School.
- Onarga—*Grand Prairie Seminary.*
- Ottawa—High School (Township).
- Paris—High School.
- Paxton—High School.
- Pekin—High School.
- Peoria—
  - *Bradley Polytechnic Institute.*
  - Central High School.
  - Manual Training High School.
- Polo—High School.
- Pontiac—High School (Township).
- Princeton—High School (Township).
- Quincy—High School.
- Riverside—High School.
- Robinson—High School (Township).
- Rochelle—High School.
- Rockford—High School.
- Rock Island—
  - *Augustana Academy.*
  - High School.
- St. Charles—High School.
- Savannah—High School (Township).
- Shelbyville—High School.
- Springfield—High School.
- Sterling—High School (Township).
- Streator—High School (Township).
- Sullivan—High School.
- Scaymore—High School.

Taylorville—High School (Township).
Tuscola—High School.
Urbana—High School.
Watseka—High School.
Waukegan—High School (Township).
West Chicago—High School.
Wheaton—
    Academy.
    High School.
Woodstock—High School.

INDIANA.

Alexandria—High School.
Anderson—High School.
Attica—High School.
Bedford—High School.
Bloomington—High School.
Brazil—High School.
Bremen—High School.
Clinton—High School.
Columbus—High School.
Connersville—
    Elmhurst School.
    High School.
Crawfordsville—High School.
Crown Point—High School.
Culver—*Military Academy.*
Decatur—High School.
East Chicago—High School.
Elkhart—High School.
Evansville—High School.
Fort Wayne—High School.
Frankfort—High School.
Franklin—High School.
Gary—High School.
Goshen—High School.
Hammond—High School.
Hartford City—High School.
Howe—*School.*
Huntington—High School.
Indianapolis—
    Manual Training High School.
    Shortridge—High School.
Jeffersonville—High School.
Kendallville—High School.
Kokomo—High School.
Lafayette—High School.
La Grange—High School.
La Porte—High School.
Lawrenceburg—High School.
Lebanon—High School.
Ligonier—High School.
Logansport—High School.
Madison—High School.
Michigan City—High School.
Mishawaka—High School.
Monticello—High School.
Mount Vernon—High School.
Muncie—High School.
New Albany—High School.
New Castle—High School.
Noblesville—High School.
North Manchester—High School.
Peru—High School.
Plymouth—High School.
Princeton—High School.
Rensselaer—High School.
Richmond—High School.
Rochester—High School.
Rockport—High School.
Rushville—High School.
Shelbyville—High School.
Sheridan—High School.
South Bend—High School.
Sullivan—High School.
Terre Haute—
    Garfield High School.
    Normal Training High School.
    Indiana State Normal Training High School.
    Wiley High School.
Union City—High School.
Valparaiso—High School.
Vincennes—High School.
Wabash—High School.
Washington—High School.
West Lafayette—High School.
Whiting—High School.
Winchester—High School.

IOWA.

Albia—High School.
Algona—High School.
Ames—High School.
Audubon—High School.
Bedford—High School.
Boone—High School.
Burlington—High School.
Carroll—High School.
Cedar Falls—
    High School.
    Iowa State Teachers College, Training School.
Cedar Rapids—High School.
Centerville—High School.
Charles City—High School.
Cherokee—High School.
Clarinda—High School.
Clinton—High School.
Corning—High School.
Corydon—High School.
Council Bluffs—High School.
Cresco—High School.
Creston—High School.
Davenport—High School.
Decorah—High School.
Denison—High School.
Des Moines—
    East High School.
    North High School.
    West High School.
Dubuque—High School.
Eagle Grove—High School.
Elkader—High School.
Emmetsburg—High School.
Fairfield—High School.
Fort Dodge—High School.
Fort Madison—High School.

Grinnell—High School.
Independence—High School.
Indianola—High School.
Iowa City—High School.
Iowa Falls—High School.
Keokuk—High School.
Lemars—High School.
Logan—High School.
Manchester—High School.
Maquoketa—High School.
Marengo—High School.
Marshalltown—High School.
Mason City—High School.
Missouri Valley—High School.
Monticello—High School.
Mount Pleasant—High School.
Muscatine—High School.
Newton—High School.
Osage—High School.
Onawa—High School.
Oskaloosa—
  High School.
  Penn College Academy.
Ottumwa—High School.
Red Oak—High School.
Sheldon—High School.
Sibley—High School.
Sioux City—High School.
Spencer—High School.
Vinton—High School.
Washington—High School.
Waterloo—
  East High School.
  West High School.
Waverly—High School.
Webster City—High School.
West Liberty—High School.

KANSAS.

Abilene—High School.
Alma—High School.
Anthony—High School.
Argentine—High School.
Arkansas City—High School.
Atchison—High School.
Baldwin—*Baker Academy.*
Burlington—High School.
Chanute—High School.
Chapman—Dickinson County High School.
Cherryvale—High School.
Clay Center—Clay County High School.
Coffeyville—High School.
Columbus—Cherokee County High School.
Concordia—High School.
Cottonwood Falls—Chase County High School.
Dodge City—High School.
Effingham—Atchison County High School.
El Dorado—High School.
Emporia—High School.
Eureka—High School.
Fort Scott—High School.
Garden City—High School.
Garnett—High School.
Great Bend—High School.
Herington—High School.
Hiawatha—High School.
Hoisington—High School.
Holton—High School.
Horton—High School.
Humboldt—High School.
Hutchinson—High School.
Independence—Montgomery County High School.
Iola—High School.
Junction City—High School.
Kansas City—
  High School.
  Sumner High School (colored).
Kingman—High School.
Kinsley—High School.
Lawrence—High School.
Leavenworth—High School.
McPherson—High School.
Manhattan—High School.
Marion—High School.
Marysville—High School.
Minneapolis—High School.
Neodesha—High School.
Newton—
  Bethel Academy.
  High School.
Nickerson—Reno County High School.
Oberlin—Decatur County High School.
Olathe—High School.
Ottawa—
  High School.
  University Academy.
Paola—High School.
Peabody—High School.
Pratt—High School.
Pittsburg—High School.
Rosedale—High School.
Sabetha—High School.
St. John—High School.
Salina—High School.
Seneca—High School.
Stafford—High School.
Sterling—High School.
Topeka—
  High School.
  Washburn Academy.
Wakeeny—Trego County High School.
Washington—High School.
Wellington—Sumner County High School.
Wichita—High School.
Winfield—High School.
Yates Center—High School.

MICHIGAN.

Adrian—High School.
Albion—High School.
Alma—High School.
Alpena—High School.
Ann Arbor—High School.
Battle Creek—High School.
Bay City—
  East side—High School.
  West side—High School.
Benton Harbor—High School.

Bessemer—High School.
Big Rapids—*Ferris Institute.*
Birmingham—High School.
Boyne City—High School.
Cadillac—High School.
Calumet—High School.
Charlevoix—High School.
Charlotte—High School.
Cheboygan—High School.
Chelsea—High School.
Coldwater—High School.
Crystal Falls—High School.
Detroit—
    Central High School.
    Eastern High School.
    Liggett School.
    McMillan High School.
    Northwestern High School.
    University School.
    Western High School.
Dollar Bay—High School.
Dowagiac—High School.
Escanaba—High School.
Evarts—High School.
Flint—High School.
Fremont—High School.
Gladstone—High School.
Grand Rapids—
    Central High School.
    Calvin College—Preparatory School.
    South Grand Rapids High School.
    Union High School.
Grand Haven—High School.
Greenville—High School.
Hancock—High School.
Hart—High School.
Hastings—High School.
Highland Park—High School.
Hillsdale—High School.
Holland—High School.
Houghton—High School.
Hudson—High School.
Iona—High School.
Iron Mountain—High School.
Ironwood—High School.
Ishpeming—High School.
Jackson—High School.
Kalamazoo—High School.
Lake Linden—High School.
Lansing—High School.
Lapeer—High School.
Lowell—High School.
Ludington—High School.
Manistee—High School.
Manistique—High School.
Marshall—High School.
Marquette—High School.
Menominee—High School.
Midland—High School.
Monroe—High School.
Muskegon—High School.
Mount Clemens—High School.
Mount Pleasant—High School.
Negaunee—High School.
Niles—High School.
Norway—High School.
Ontonagon—High School.
Otsego—High School.
Owosso—High School.
Painesdale—High School.
Paw Paw—High School.
Petoskey—High School.
Pontiac—High School.
Port Huron—High School.
Portland—High School.
River Rouge—High School.
Saginaw—
    East side—High School.
    West side—High School.
Sault Ste. Marie—High School.
South Haven—High School.
St. Johns—High School.
St. Joseph—High School.
St. Louis—High School.
Sturgis—High School.
Three Rivers—High School.
Traverse City—High School.
Union City—High School.
Wakefield—High School.
Williamston—High School.
Wyandotte—High School.
Ypsilanti—High School.

MINNESOTA.

Aitken—High School.
Albert Lea—High School.
Alexandria—High School.
Anoka—High School.
Austin—High School.
Bemidji—High School.
Blue Earth—High School.
Brainerd—High School.
Canby—High School.
Chisholm—High School.
Cloquet—High School.
Coleraine—High School.
Crookston—High School.
Detroit—High School.
Duluth—
    Central High School.
    R. E. Denfeld High School.
East Grand Forks—High School.
Ely—High School.
Eveleth—High School.
Fairmont—High School.
Faribault—High School.
Fergus Falls—High School.
Gilbert—High School.
Glencoe—High School.
Grand Rapids—High School.
Hastings—High School.
Hector—High School.
Hibbing—High School.
Hopkins—High School.
Hutchinson—High School.
Jackson—High School.
Lake City—High School.
Litchfield—High School.
Little Falls—High School.
Luverne—High School.

- Mankato—High School.
- Marshall—High School.
- Milaca—High School.
- Minneapolis—
  - Central High School.
  - East High School.
  - North High School.
  - South High School.
  - West High School.
- Montevideo—High School.
- Moorhead—High School.
- Morris—High School.
- New Ulm—High School.
- Northfield—High School.
- Owatonna—High School.
- Pipestone—High School.
- Red Wing—High School.
- Redwood Falls—High School.
- St. Cloud—High School.
- St. James—High School.
- St. Paul—
  - Central High School.
- St. Paul—Continued.
  - Cleveland High School.
  - Humboldt High School.
  - John A. Johnson High School.
  - Mechanic Arts High School.
- St. Peter—High School.
- Sauk Center—High School.
- Sleepy Eye—High School.
- South St. Paul—High School.
- Spring Valley—High School.
- Stillwater—High School.
- Thief River Falls—High School.
- Two Harbors—High School.
- Virginia—High School.
- Wadena—High School.
- Waseca—High School.
- Wells—High School.
- Willmar—High School.
- Windom—High School.
- Winona—High School.
- Worthington—High School.

MISSOURI.

- Boonville—*Kemper Military School.*
- Butler—High School.
- Cameron—High School.
- Carrollton—High School.
- Carthage—High School.
- Charleston—High School.
- Chillicothe—High School.
- Clayton—High School.
- Columbia—
  - *Christian College Academy.*
  - High School.
  - *Stephens College Academy.*
  - University High School.
- Ferguson—High School.
- Fredericktown—High School.
- Fulton—High School.
- Hannibal—High School.
- Higginsville—High School.
- Jefferson City—High School.
- Joplin—High School.
- Kansas City—
  - Central High School.
  - Manual Training High School.
  - North East High School.
  - Westport High School.
- Kennett—High School.
- Kirkwood—High School.
- Lamar—High School.
- Lebanon—High School.
- Lexington—
  - High School.
  - *Wentworth Military Academy.*
- Maplewood—High School.
- Maryville—High School.
- Mexico—
  - High School.
  - *Hardin College Academy.*
- Nevada—
  - *Cottey College Academy.*
  - High School.
- Paris—High School.
- Poplar Bluff—High School.
- St. Charles—
  - High School.
  - *Lindenwood College Academy.*
- St. Joseph—High School.
- St. Louis—
  - Central High School.
  - *Hosmer Hall.*
  - *Lenox Hall.*
  - McKinley High School.
  - *Manual Training School, Washington University.*
  - *Mary Institute.*
  - *Smith Academy.*
  - Soldan High School.
  - Sumner High School.
  - *The Principia.*
  - Yeatman High School.
- Savannah—High School.
- Sedalia—High School.
- Shelbina—High School.
- Slater—High School.
- Trenton—High School.
- Webb City—High School.
- Webster Grove—High School.
- Wellston—High School.
- West Plains—High School.

MONTANA.

- Anaconda—High School.
- Bigtimber—Sweet Grass County High School.
- Billings—High School.
- Bozeman—Gallatin County High School.
- Butte—High School.
- Chinook—High School.
- Deer Lodge—Powell County High School.
- Dillon—Beaverhead County High School.
- Glendive—Dawson County High School.
- Great Falls—High School.
- Hamilton—High School.
- Havre—High School.

Helena—High School.
Kalispell—Flathead County High School.
Lewistown—Fergus County High School.
Livingston—Park County High School.
Miles City—Custer County High School.
Missoula—County High School.
Phillipsburg—Granite County High School.
Red Lodge—Carbon County High School.

NEBRASKA.

Albion—High School.
Alliance—High School.
Ashland—High School.
Auburn—High School.
Aurora—High School.
Beatrice—High School.
Benson—High School.
Blair—High School.
Broken Bow—High School.
Central City—High School.
Columbia—High School.
Crete—High School.
Edgar—High School.
Fairbury—High School.
Fairfield—High School.
Fairmont—High School.
Falls City—High School.
Franklin—*Academy*.
Fremont—High School.
Friend—High School.
Fullerton—High School.
Geneva—High School.
Grand Island—High School.
Harvard—High School.
Hastings—
  Academy.
  High School.
Havelock—High School.
Hebron—High School.
Holdrege—High School.
Humboldt—High School.
Kearney—High School.
Lexington—High School.
Lincoln—
  High School.
  Teachers' College High School, University of Nebraska.
McCook—High School.
Mindon—High School.
Nebraska City—High School.
Neligh—High School.
Newman Grove—High School.
Norfolk—High School.
North Platte—High School.
Omaha—
  Brownell Hall.
  High School.
Pawnee—High School.
Ravenna—High School.
Red Cloud—High School.
Schuyler—High School.
Scottsbluff—High School.
Seward—High School.
Shelton—High School.
South Omaha—High School.
Stanton—High School.
Superior—High School.
Tecumseh—High School.
Tekamah—High School.
University Place—
  High School.
  Nebraska Wesleyan Academy.
Wahoo—High School.
York—High School.

NORTH DAKOTA.

Agricultural College—Agricultural and Manual Training High School.
Beach—High School.
Bismarck—High School.
Bottineau—High School.
Cando—High School.
Carrington—High School.
Casselton—High School.
Cavalier—High School.
Cooperstown—High School.
Devils Lake—High School.
Dickinson—High School.
Edgeley—High School.
Fargo—High School.
Grafton—High School.
Grand Forks—High School.
Hope—High School.
Jamestown—High School.
Kenmare—High School.
Lakota—High School.
La Moure—High School.
Langdon—High School.
Larimore—High School.
Lisbon—High School.
Mandan—High School.
Minot—High School.
New Rockford—High School.
Park River—High School.
Rugby—High School.
University—Model High School.
Valley City—High School.
Wahpeton—High School.
Williston—High School.

OHIO.

Akron—
  Central High School.
  South High School.
  West High School.
Alliance—High School.
Ashland—High School.
Ashtabula—High School.
Ashtabula Harbor—High School.
Barberton—High School.
Bellaire—High School.
Bellefontaine—High School.
Bellevue—High School.

- Bluffton—High School.
- Bowling Green—High School.
- Bryan—High School.
- Bucyrus—High School.
- Cambridge—High School.
- Canal Dover—High School.
- Canton—High School.
- Celina—High School.
- Chardon—High School.
- Chicago Junction—High School.
- Chillicothe—High School.
- Cincinnati—
  - *College Preparatory School for Girls.*
  - *Franklin School.*
  - Hartwell High School.
  - Hughes High School.
  - Pleasant Ridge—High School.
  - *University School.*
  - Walnut Hills High School.
  - Woodward High School.
- Circleville—High School.
- Cleveland—
  - Central High School.
  - East High School.
  - East Technical High School.
  - Glenville High School.
  - Lincoln High School.
  - South High School.
  - *University School.*
  - West High School.
  - West Technical High School.
- Cleveland Heights—High School.
- Columbiana—High School.
- Columbus—
  - Clinton High School.
  - East High School.
  - North High School.
  - South High School.
  - *School for Girls.*
  - West High School.
- Conneaut—High School.
- Coshocton—High School.
- Crestline—High School.
- Cuyahoga Falls—High School.
- Danville—High School.
- Dayton—
  - Steele High School.
  - *St. Mary's Institute.*
  - Stivers Manual Training High School.
- Defiance—High School.
- Delaware—High School.
- Delphos—High School.
- Dennison—High School.
- East Cleveland—High School.
- East Liverpool—High School.
- East Palestine—High School.
- Eaton—High School.
- Elyria—High School.
- Findlay—High School.
- Fostoria—High School.
- Fremont—High School.
- Galion—High School.
- Gallipolis—High School.
- Geneva—High School.
- Girard—High School.
- Granville—*Doane Academy.*
- Greenfield—High School.
- Greenville—High School.
- Hamilton—High School.
- Hillsboro—High School.
- Ironton—High School.
- Jackson—High School.
- Jefferson—High School.
- Kent—High School.
- Kenton—High School.
- Lakewood—High School.
- Lancaster—High School.
- Leroy—High School.
- Lima—High School.
- Lisbon—High School.
- Lockland—High School.
- Logan—High School.
- London—High School.
- Lorain—High School.
- Madisonville—High School.
- Mansfield—High School.
- Marietta—High School.
- Marion—High School.
- Martins Ferry—High School.
- Marysville—High School.
- Massillon—High School.
- Madina—High School.
- Miamisburg—High School.
- Middletown—High School.
- Mount Vernon—High School.
- Napoleon—High School.
- Nelsonville—High School.
- Newark—High School.
- New Bremen—High School.
- New Concord—High School.
- New Lexington—High School.
- New Philadelphia—High School.
- Niles—High School.
- Norwalk—High School.
- Norwood—High School.
- Oak Harbor—High School.
- Oberlin—
  - *Academy.*
  - High School.
- Orrville—High School.
- Painesville—High School.
- Piqua—High School.
- Plain City—High School.
- Pomeroy—High School.
- Port Clinton—High School.
- Portsmouth—High School.
- Ravenna—High School.
- Reily—High School (Township).
- Rio Grande—
  - Raccoon Township High School.
- Salem—High School.
- Sandusky—High School.
- Shelby—High School.
- Springfield—High School.
- Sidney—High School.
- Steubenville—High School.
- Saint Marys—High School.
- Tiffin—High School.
- Tippecanoe City—High School.
- Toledo—
  - Scott High School.
  - *Smead School.*
  - Waite High School.
- Troy—High School.

Uhrichsville—High School.
Upper Sandusky—High School.
Urbana—
    High School.
    University School.
Van Wert—High School.
Wadsworth—High School.
Wapakoneta—High School.
Warren—High School.
Washington Courthouse—High School.
Wauseon—High School.
Wellston—High School.
Wellsville—High School.
Westerville—High School.
West Jefferson—High School.
Willoughby—High School.
Wilmington—High School.
Wooster—
    Academy.
    High School.
Wyoming—High School.
Xenia—High School.
Youngstown—
    Rayen High School.
    South High School.
Zanesville—High School.

OKLAHOMA.

Ardmore—High School.
Bartlesville—High School.
Blackwell—High School.
Chickasha—High School.
El Reno—High School.
Enid—
    High School.
    Phillips University High School.
Guthrie—High School.
Hugo—High School.
Lawton—High School.
McAlester—High School.
Muskogee—High School.
Okmulgee—High School.
Oklahoma—High School.
Sapulpa—High School.
Tonkawa—University Preparatory School.
Tulsa—
    Henry Kendall Academy.
    High School.
Vinita—High School.

SOUTH DAKOTA.

Aberdeen—High School.
Armour—High School.
Brookings—High School.
Canton—High School.
Clark—High School.
Deadwood—High School.
Flandreau—High School.
Huron—High School.
Lead—High School.
Madison—High School.
Milbank—High School.
Miller—High School.
Mitchell—High School.
Pierre—High School.
Rapid City—High School.
Redfield—High School.
Sioux Falls—
    All Saints School.
    High School.
Vermillion—High School.
Watertown—High School.
Webster—High School.
Yankton—High School.

WISCONSIN.

Antigo—High School.
Appleton—High School.
Ashland—High School.
Baraboo—High School.
Beaver Dam—
    High School.
    Wayland Academy.
Beloit—High School.
Berlin—High School.
Boscobel—High School.
Burlington—High School.
Chippewa Falls—High School.
Columbus—High School.
Delafield—*St. John's Military Academy.*
Delavan—High School.
Dodgeville—High School.
Eau Claire—High School.
Edgerton—High School.
Elkhorn—High School.
Ellsworth—High School.
Elroy—High School.
Evansville—High School.
Fennimore—High School.
Fond du Lac—High School.
Fort Atkinson—High School.
Grand Rapids—High School.
Green Bay—
    (East)—High School.
    (West)—High School.
Hartford—High School.
Hudson—High School.
Janesville—High School.
Kaukauna—High School.
Kenosha—High School.
La Crosse—High School.
Lake Geneva—High School.
Lancaster—High School.
Lodi—High School.
Madison—
    High School.
    Wisconsin High School.
Manitowoc—High School.
Marinette—High School.
Marshfield—High School.
Medford—High School.
Menasha—High School.

Menomonie—High School.
Merrill—High School.
Milwaukee—
  (East)—High School.
  (North)—High School.
  (South)—High School.
  (West)—High School.
  Milwaukee-Downer Seminary.
Mineral Point—High School.
Monroe—High School.
Neenah—High School
Neillsville—High School.
New London—High School.
New Richmond—High School.
Oconomowoc—High School.
Oconto—High School.
Oshkosh—High School.
Platteville—High School.
Plymouth—High School.
Portage—High School.
Racine—
  College Grammar School.
  High School.
Reedsburg—High School.
Rhinelander—High School.
Rice Lake—High School.
Richland Center—High School.
Ripon—High School.
River Falls—High School.
Sheboygan—High School.
Sinsinawa—*St Clara Academy.*
South Milwaukee—High School.
Sparta—High School.
Stanley—High School.
Stevens Point—High School.
Stoughton—High School.
Sturgeon Bay—High School.
Superior—
  Central High School.
  Nelson Dewey High School.
Tomah—High School.
Washburn—High School.
Watertown—High School.
Waukesha—High School.
Waupaca—High School.
Waupun—High School.
Wausau—High School.
Wauwatosa—High School.
West Allis—High School.
West Bend—High School.
Whitewater—High School.

WYOMING.

Casper—High School.
Cheyenne—High School.
Laramie—High School.
Sheridan—High School.

PART III.—LISTS OF CERTAIN PRIVATE INSTITUTIONS.

Schools in Washington, D. C., Accredited by George Washington University, April, 1916.

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	2½
Foreign languages	2
Electives	7½

Army and Navy Preparatory School.
Bristol School.
Business High School.
Central High School.
Chevy Chase Seminary.
Eastern High School.
Emerson Institute.
Fairmont Seminary.
Friends' Select School.
Gunston Hall.
Hall-Noyes School.
Holton-Arms School.
Madeira School for Girls.
Manual Training High School.
Martha Washington Seminary.
Mount Vernon Seminary.
Misses Eastman's School.
National Cathedral for Boys.
National Cathedral School for Girls.
University Preparatory School.
Washington Collegiate School.
Washington College.
Western High School.

Schools Affiliated to the Catholic University of America, April, 1916.

	Units.
Admission requirements	15
Prescribed units:	
Religion	2
English	3
Some language other than English	2
Mathematics	2
Social science (including history)	1
Natural science	1
Electives (must be selected in such a way as to give another course besides English of 3 units)	4

Alabama:
- Birmingham—*Blessed Sacrament Academy.*

California:
- San Francisco—*College of Notre Dame, High School Department.*

San Jose—
- *College of Notre Dame, Secondary Department.*
- *Notre Dame High School.*

Colorado:
- Denver—*St. Mary's Academy.*
- Loretto—*Loretto Heights Academy.*

Connecticut:
- Hartford—*Mount St. Joseph Seminary.*
- Milford—*Academy of Our Lady of Mercy.*
- Waterbury—*Notre Dame Academy.*

Florida:
- Miami—*Academy of the Sisters of St. Joseph.*
- St. Augustine—*St. Joseph's Academy.*

Georgia:
- Augusta—*Mount St. Joseph Academy.*

Illinois:
- Kankakee—*St. Joseph Seminary.*
- Rock Island—*Villa de Chantal.*

Indiana:
- Oldenburg—*Immaculate Conception Academy.*
- St. Mary's—*St. Mary-of-the-Woods Academy.*

Iowa:
- Cedar Rapids—*Sacred Heart Academy.*
- Dubuque—
  - *Mount St. Joseph Academy.*
  - *St. Francis High School.*
  - *St. Joseph's Academy.*
  - *St. Joseph Academy.*
- Dyersville—*St. Francis Academy.*
- Elma—*Immaculate Conception Academy.*
- New Hampton—*St. Mary's High School.*
- Riverside—*St. Mary Convent.*
- Waterloo—*St. Mary's High School.*

Kansas:
- Wichita—*Cathedral High School.*

Kentucky:
  Covington—*Villa Madonna Academy.*
  Loretto—*Loretto Academy.*
  Nazareth—*Nazareth Academy.*
  Newport—
    Academy Notre Dame of Providence.
    Mount St. Martin's Convent.
Maryland:
  Mount Washington—*Mount St. Agnes High School.*
Massachusetts:
  Arlington Heights—*Marycliff Academy.*
  Boston—*Boston Academy of Notre Dame.*
  Lowell—*Notre Dame Academy.*
  Roxbury—*Notre Dame Academy.*
  Watertown—*Sacred Heart Academy.*
Michigan:
  Ironwood—*St. Ambrose High School.*
Minnesota:
  Duluth—*Villa Sancta Scholastica.*
  St. Joseph—*St. Benedict's Academy.*
Missouri:
  Kansas City—
    De la Salle Academy.
    Loretto Academy.
    St. Theresa's Academy.
  St. Joseph—*Cathedral High School.*
  St. Louis—
    Loretto Academy.
    St. Elizabeth's Institute.
    The Academy of the Visitation.
  Springfield (Elfindale)—*St. de Chantal Academy of the Visitation.*
Nebraska:
  Hastings—*Immaculate Conception Academy.*
New Jersey:
  Caldwell—*Mount St. Dominic Academy.*
New York:
  Lockport—*St. Joseph's Academy.*
  Tarrytown-on-Hudson—*Marymount.*
Ohio:
  Cincinnati—
    Notre Dame Academy (Court and Mound Streets).
    Notre Dame Academy (East Sixth Street).
    Notre Dame Academy (Grandin Road).
    Our Lady of Mercy Academy.
    St. Mary High School (Hyde Park).
    St. Ursula's Academy.
  Cleveland—*Ursuline Academy.*
  Columbus—*St. Joseph's Academy.*
  Dayton—*Notre Dame Academy.*
  Hamilton—*Notre Dame Academy.*
  Maria Stein—*Mother House, Sisters of the Precious Blood.*
  New Lexington—*St. Aloysius Academy.*
  Nottingham—*Ursuline Academy.*
  Reading—*Mount Notre Dame Academy.*
Ohio—Continued.
  St. Joseph—*Mount St. Joseph-on-the-Ohio.*
  Springfield—*St. Raphaels School.*
  Toledo—*St. Francis de Sales Cathedral High School.*
Oklahoma:
  Guthrie—*St. Joseph's Academy.*
Pennsylvania:
  Frazer—*Villa Maria Academy.*
  Glen Riddle—*Our Lady of Angels High School.*
  Greensburg—*St. Joseph Academy.*
  Hazelton—*St. Gabriel's High School.*
  Philadelphia—
    Academy of Notre Dame.
    Academy of the Holy Child Jesus.
    Academy of the Sisters of Mercy.
    Mount St. Joseph Convent (Chestnut Hill).
  Pittsburgh—
    Holy Rosary High School.
    Lady of Mercy Academy.
    St. Paul's Cathedral High School.
  Pittston—*St. John's High School.*
  Scranton—
    Mount St. Mary's Seminary.
    St. Cecilia Academy.
  Sharon Hill—*Academy of the Holy Child Jesus.*
  Wilkes-Barre—*St. Mary's High School.*
Tennessee:
  Nashville—
    St. Bernard Academy.
    St. Cecilia's Academy.
Texas:
  Dallas—
    Our Lady of Good Counsel Academy.
    St. Edward's Academy.
  Denison—*St. Xavier's Academy.*
  Forth Worth—*Our Lady of Victory Academy.*
  San Antonio—
    Academy of the Incarnate Word.
    Our Lady of the Lake Academy.
  Sherman—*St. Joseph's Academy.*
  Waco—*Sacred Heart Academy.*
  Wichita Falls—*Mary Immaculate Academy.*
Virginia:
  Bristow—*St. Edith Academy.*
Washington:
  Seattle—*Holy Names Academy.*
  Spokane—*Holy Names Academy.*
  Tacoma—*Aquinas Academy.*
Wisconsin:
  Altoona—*St. Mary's Academy and High School.*
  Fond du Lac—
    St. Agnes Convent Normal School.
    St. Mary's Springs Academy.
  Green Bay—*St. Joseph Academy.*
  Milwaukee—*St. Mary's Academy.*
  Sinsinawa—*St. Clara Academy.*

ACCREDITED BY THE UNIVERSITY OF CHICAGO, CHICAGO, ILL., APRIL, 1916.

(In addition to the following, the schools belonging to the North Central Association of Colleges and Secondary Schools (see p. 98) are accredited by the University of Chicago.)

	Unit.
Admission requirements	15
Prescribed units:	
English	3
Selected from the following subjects: Latin, Greek, modern language, history, mathematics, science	7
Electives	5

Alabama:
- Birmingham—Central High School.
- Mobile—High School.
- Montgomery—Girls' High School.

Arkansas:
- Fort Smith—High School.
- Hot Springs—High School.
- Little Rock—High School.

California:
- Los Angeles—High School.
- Pasadena—High School.
- San Francisco—Girls' High School.

Georgia:
- Atlanta—Girls' High School.

Idaho:
- Boise—High School.
- Pocatello—High School.

Kentucky:
- Louisville—
  - Boys' High School.
  - Girls' High School.
  - Manual Training High School.
- Owensboro—High School.
- Paducah—High School.

Louisiana:
- Alexandria—Bolton High School.
- Monroe—High School.

Pennsylvania:
- Harrisburg—High School.

Tennessee:
- Pulaski—Massey High School.

Texas:
- Amarillo—High School.
- Austin—High School.
- Beaumont—High School.
- Dallas—
  - Main High School.
  - Oak Cliff High School.
- Denison—High School.
- El Paso—High School.
- Fort Worth—High School.
- Galveston—High School.
- Hillsboro—High School.
- Houston—High School.
- San Antonio—High School.
- Waco—High School.

Utah:
- Ogden—High School.

Washington:
- Seattle—Broadway High School.
- Spokane—
  - Central High School.
  - Lewis and Clark High School.

West Virginia:
- Glenville—High School Department of State Normal School.

Affiliated with Tulane University of Louisiana, March, 1916.

	Units.
Entrance requirements	15
Prescribed units:	
English	3
Mathematics	3
Foreign language	2
Latin	3
Greek, or science (1) and history (1)	2
Electives	2

Alabama:
- Birmingham—City High School.
- Gadsden—High School.
- Marion—*Military Institute.*
- Mobile—
  - High School.
  - *University Military School.*
- Montgomery—*University School.*

Arkansas:
- Hope—High School.
- Magnolia—High School.
- Pine Bluff—High School.

Florida:
- Pensacola—High School.

Georgia:
- Columbus—High School.

Louisiana:
- Abbeville—High School.
- Alexandria—High School.
- Arcadia—High School.

Louisiana—Continued.
- Bastrop—High School.
- Baton Rouge—High School.
- Bienville—High School.
- Brusly—High School.
- Crowley—High School.
- Donaldsonville—High School.
- Franklin—High School.
- Gibsland—High School.
- Hammond—High School.
- Homer—High School.
- Houma—
  - High School.
  - *Lorton Preparatory School.*
- Jennings—High School.
- Lake Charles—High School.
- Marksville—High School.
- Minden—Graded High School.

- Louisiana—Continued.
  - Monroe—
    - City High School.
    - Ouachita Parish High School.
  - Napoleonville—High School.
  - New Iberia—High School.
  - New Orleans—
    - *Chenet Institute.*
    - *Holy Cross Academy.*
    - *L. C. Ferrell's School for Boys.*
    - *Isidore Newman Manual Training High School.*
    - *Rugby Academy.*
    - *St. Aloysius College.*
    - Warren Easton High School.
  - Opelousas—High School.
  - St. Martinsville—High School.
  - Shreveport—High School.
  - Tallulah—High School.
  - Vidalia—High School.
  - Washington—High School.
- Mississippi:
  - Armory—High School.
  - Como—High School.
- Mississippi—Continued.
  - Laurel—High School.
  - Meridian—High School.
  - Natchez—High School.
  - Washington—*Jefferson Military College.*
- Tennessee:
  - Columbia—*Military Academy.*
  - Lebanon—Castle Heights High School.
  - Martin—*McFerrin Training School.*
  - Memphis—High School.
- Texas:
  - Beaumont—High School.
  - Bryan—*Allen Academy.*
  - Dallas—High School.
  - Denton—High School.
  - Dublin—High School.
  - Ennis—High School.
  - Fort Worth—High School.
  - Houston—High School.
  - San Antonio—High School.
  - Sherman—High School.
  - Victoria—High School.
  - Waco—High School.

Schools in Maryland Accredited by St. John's College, March, 1916.

	Units.
Entrance requirements	14
Prescribed units:	
Latin	4
English	3
Mathematics	3
History	2
Greek	[1] 2
Electives	[2] 2

- Annapolis—High School.
- Brunswick—High School.
- Cambridge—High School.
- Catonsville—High School.
- Centerville—High School.
- Charlotte Hall—*Academy.*
- Chestertown—High School.
- Crisfield—High School.
- Cumberland—High School.
- Denton—High School.
- Easton—High School.
- Elkton—High School.
- Ellicott City—High School.
- Frederick—High School.
- Frostburg—High School.
- Hagerstown—High School.
- Havre de Grace—High School.
- La Plata—McDonogh Institute.
- Laurel—High School.
- Lonaconing—High School.
- Millersville—*Anne Arundel Academy.*
- Oakland—High School.
- Port Deposit—*Jacob Tome Institute.*
- Pocomoke City—High School.
- Reisterstown—High School.
- Rockville—
  - *Academy.*
  - High School.
- Salisbury—High School.
- Sparrows Point—High School.
- Snow Hill—High School.
- Towson—High School.
- Westminster—High School.

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[1] For classical course.

[2] For Latin-scientific course.

Schools outside of New England Accredited by Mount Holyoke College, March 23, 1916.

(The schools in New England accredited by Mount Holyoke are those of the New England College Entrance Certificate Board. See p. —.)

	Units.
Admission requirements	14½
Prescribed units:	
English	3
History	1
Latin	4
Mathematics	2½
French, German, or Greek	2
Electives	2

- Alabama:
  - Montgomery—
    - Lanier High School.
    - *The Margaret Booth School.*
- California:
  - Berkeley—High School.
  - Claremont—High School.
  - Fowler—Union High School.

California—Continued.
- Los Angeles—*Marlborough School.*
- Palo Alto—*Castilleja School.*
- Pasadena—High School.
- Riverside—Girls' High School.

Colorado:
- Boulder—State Preparatory School.
- Denver—East Side High School.

District of Columbia:
- Washington—
  - Eastern High School.
  - *Miss Madeira's School.*
  - M Street High School.
  - *National Cathedral School for Girls.*
  - Western High School.

Georgia:
- Atlanta—
  - *Washington Seminary.*
  - *Woodberry Hall.*
- Columbus—High School.

Hawaii:
- Honolulu—*Oahu College.*

Idaho:
- Blackfoot—High School.
- Boise—*St. Margaret's Hall.*

Illinois:
- Alton—High School.
- Anna—High School.
- Champaign—High School.
- Chicago—
  - Calumet High School.
  - *The Faulkner School.*
  - Hyde Park High School.
  - Lake View High School.
  - Marshall High School.
  - Senn High School.
  - *University High School.*
  - *University School for Girls.*
  - Waller High School.
- Chicago Heights—High School (Township).
- Cicero—J. Sterling Morton High School.
- Elgin—*Academy.*
- Evanston—
  - *Academy.*
  - High School (Township).
- Freeport—High School.
- Galesburg—High School.
- Godfrey—*Monticello Seminary.*
- Harvey—Thornton Township High School.
- Hinsdale—High School.
- Kenilworth—New Trier Township High School.
- Lake Forest—*Ferry Hall.*
- Oak Park—High School (Township).
- Peoria—*Bradley Polytechnic Institute.*
- Princeton—High School.
- Waukegan—High School (Township).
- Winnetka—*The Girton School.*

Indiana:
- Evansville—High School.
- Greencastle—High School.
- Indianapolis—Shortridge High School.
- Hammond—High School.
- Laporte—High School.
- Princeton—High School.

Iowa:
- Davenport—High School.
- Des Moines—High School.
- Maquoketa—High School.

Kansas:
- Kansas City—High School.

Kentucky:
- Danville—*Kentucky College for Women.*
- Lexington—*Hamilton* (*Junior*) *College for Women.*
- Louisville—Girls' High School.
- Shelbyville—*Science Hill School.*

Maryland:
- Baltimore—Western High School.
- Catonsville—*St. Timothy's School.*

Michigan:
- Adrian—High School.
- Ann Arbor—High School.
- Detroit—
  - Central High School.
  - Eastern High School.
- Grand Rapids—Central High School.
- Morenci—High School.

Minnesota:
- Bemidji—High School.
- Duluth—Central High School.
- Minneapolis—
  - Central High School.
  - *Stanley Hall.*
- St. Paul—Mechanic Arts High School.
- Willmar—High School.

Missouri:
- Kansas City—*Miss Barstow's School.*
- St. Louis—
  - Central High School.
  - Grover Cleveland High School.
  - McKinley High School.
  - Soldan High School.
  - Sumner High School.
  - Yeatman High School.

Nebraska:
- Omaha—High School.

New Jersey:
- Asbury Park—High School.
- Bernardsville—Bernards High School.
- Bloomfield—High School.
- Butler—High School.
- Chatham—High School.
- Cranford—High School.
- Dover—High School.
- East Orange—High School.
- Elizabeth—
  - Battin High School.
  - *Vail-Deane School.*
- Flemington—High School.
- Glen Ridge—High School.
- Gloucester City—High School.
- Hackensack—High School.
- Hackettstown—*Centenary Collegiate Institute.*
- Hammonton—High School.
- Jersey City—Dickinson High School.
- Lambertville—High School.
- Matawan—High School.
- Millville—High School.

New Jersey—Continued.
- Montclair—High School.
- Morristown—High School.
- Mount Holly—High School.
- Newark—
  - Barringer High School.
  - *Prospect Hill School.*
- New Brunswick—*The Misses Anable's School.*
- Orange—High School.
- Passaic—High School.
- Paterson—*Hoover School.*
- Perth Amboy—High School.
- Plainfield—
  - High School.
  - North Plainfield High School.
- Princeton—High School.
- Ridgewood—High School.
- Roselle—High School.
- Somerville—High School.
- South Orange—Columbia High School.
- Summit—High School.
- Trenton—State Model High School.
- Westfield—High School.
- Wildwood—High School.

New York:
- Akron—High School.
- Albany—
  - *Academy for Girls.*
  - High School.
- Albion—High School.
- Amsterdam—High School.
- Aurora—*Wallcourt.*
- Boonville—High School.
- Bronxville—*Brantwood Hall.*
- Brooklyn—
  - *Adelphi Academy.*
  - *Berkeley Institute.*
  - *Brooklyn Heights Seminary.*
  - Girls' High School.
  - *Packer Collegiate Institute.*
- Buffalo—
  - Lafayette High School.
  - Masten Park High School.
  - *Seminary.*
- Canajoharie—High School.
- Carmel—*Drew Seminary.*
- Cazenovia—*Seminary.*
- Cohoes—Egberts High School.
- Corning—Free Academy.
- Dansville—High School.
- Delevan—High School.
- Dunkirk—High School.
- East Hampton—High School.
- Fairport—High School.
- Florida—*S. S. Seward Institute.*
- Flushing—High School.
- Forestville—High School.
- Fredonia—State Normal School (High School Department).
- Glens Falls—High School.
- Gloversville—High School.
- Granville—High School.
- Greenwich—High School.
- Hancock—High School.
- High Bridge—High School.
- Hillsdale—High School.
- Hudson—High School.

New York—Continued.
- Jamaica—High School.
- Jamestown—High School.
- Kingston—High School.
- Lockport—High School.
- Locust Valley—*Friends Academy.*
- Mechanicsville—High School.
- Middletown—High School.
- Mount Kisco—High School.
- Mount Vernon—High School.
- New Brighton—Curtis High School.
- Newburgh—Free Academy.
- New Paltz—High School Department of State Normal School.
- New Rochelle—High School.
- New York—
  - *Barnard School for Girls.*
  - Wadleigh High School.
- Norwich—High School.
- Olean—High School.
- Oneonta—High School.
- Ossining—*School.*
- Patchogue—High School.
- Pelham Manor—Pelham High School.
- Perry—High School.
- Pleasantville—High School.
- Port Washington—High School.
- Poughkeepsie—
  - High School.
  - *Putnam Hall School.*
- Randolph—High School.
- Richmond Hill—High School.
- Rochester—
  - East High School.
  - West High School.
- Roxbury—High School.
- St. Johnsville—High School.
- Seneca Falls—Mynderse Academy.
- Sherburne—High School.
- Springville—Griffith Institute and Union School.
- Stamford—Seminary and Union Free School.
- Suffern—High School.
- Syracuse—
  - Central High School.
  - North High School.
- Tarrytown—*The Knox School.*
- Ticonderoga—High School.
- Troy—
  - *Emma Willard School.*
  - High School.
- Utica—Free Academy.
- Walton—High School.
- Waterville—High School.
- Watkins—High School.
- White Plains—High School.
- Yonkers—High School.

Ohio:
- Ashland—High School.
- Canton—High School.
- Cincinnati—
  - Madisonville High School.
  - *Oakhurst Collegiate Institute.*
- Cleveland—East High School.
- Columbus—North High School.
- Delaware—High School.
- East Cleveland—Shaw High School.

Ohio—Continued.
- Glendale—*College.*
- Hamilton—High School.
- Medina—High School.
- St. Marys—High School.
- Toledo—
  - Jesup W. Scott High School.
  - *Smead School.*
- Waynesville—Wayne Township High School.
- Youngstown—
  - Rayen High School.
  - South High School.

Pennsylvania:
- Allentown—*The College for Women.*
- Altoona—High School.
- Beaver—High School.
- Bellefonte—High School.
- Bellevue—High School.
- Birmingham—*School for Girls.*
- Bryn Mawr—*The Baldwin School.*
- Butler—High School.
- Chambersburg—*Penn Hall.*
- Chester—High School.
- Clearfield—High School.
- Coudersport—High School.
- Crafton—High School.
- Danville—High School.
- Erie—High School.
- George School—*George School.*
- Harrisburg—Central High School.
- Holidaysburg—*Miss Cowles's School for Girls.*
- Honesdale—High School.
- Kingston—*Wyoming Seminary.*
- Lancaster—*The Shippen School.*
- Lansdowne—High School.
- Lebanon—High School.
- Lewiston—*Preparatory School.*
- Nazareth—High School.
- New Brighton—High School.
- Oil City—High School.
- Oxford—High School.
- Pennsburg—*Perkiomen Seminary.*
- Philadelphia—
  - *Friends' Central School.*
  - *Friends' Select School.*
  - *Germantown Friends' School.*
  - High School for Girls.
  - *Miss Hill's School for Girls.*
  - (Germantown) *Walnut Lane School.*
  - West Philadelphia High School for Girls.
  - William Penn High School.
- Pittsburgh—
  - Allegheny High School.
  - *Dilworth Hall.*
  - Peabody High School.
  - *Thurston Preparatory School.*
  - *The Winchester School.*

Pennsylvania—Continued.
- Pottsville—High School.
- Reading—High School for Girls.
- Ridgway—Boro High School.
- Scranton—Central High School.
- Sewickley—High School.
- Sharon—High School.
- Swarthmore—
  - High School.
  - *The Mary Lyon School.*
- Towanda—High School.
- Tunkhannock—High School.
- Warren—High School.
- Washington—
  - High School.
  - *Seminary.*
- Wellsboro—High School.
- West Chester—
  - *Darlington Seminary.*
  - High School.
  - State Normal School.
- Westtown—*Boarding School.*
- Wilkinsburg—High School.
- Williamsport—High School.
- York—High School.

South Dakota:
- Sioux Falls—*All Saints School.*

Tennessee:
- Chattanooga—*Girls' Preparatory School.*
- Knoxville—High School.
- Pulaski—*Martin College.*

Texas:
- San Antonio—High School.

Virginia:
- Roanoke—*Virginia College.*
- Staunton—*Mary Baldwin Seminary.*

Washington:
- Olympia—High School.
- Seattle—
  - Broadway High School.
  - Queen Anne High School.
  - *Saint Nicholas School.*
- Spokane—
  - Lewis and Clark High School.
  - North Central High School.
- Tacoma—Stadium High School.

West Virginia:
- Martinsburg—High School.

Wisconsin:
- Eau Claire—High School.
- Grand Rapids—High School.
- Kenosha—*Kemper Hall.*
- Milwaukee—
  - *Milwaukee-Downer Seminary.*
  - West Division High School.

Schools outside of New England accredited to Wellesley College April, 1916.

(The schools in New England accredited by Wellesley College are those of the New England College Entrance Certificate Board. See p. —.)

	Units.
Admission requirements	15
Prescribed units:	
English	3
Mathematics	3
History	1
Latin	4
Electives	4

Alabama:
- Birmingham—High School.
- Montgomery—*Margaret Booth School.*

Arkansas:
- Fort Smith—High School.

California:
- Alameda—High School.
- Berkeley—
  - *Miss Head's School.*
  - High School.
- Corona—High School.
- Glendale—High School.
- Los Angeles—
  - *Girls' Collegiate School.*
  - High School.
  - Manual Arts High School.
- Palo Alto—*Castilleja School.*
- San Bernardino—High School.
- San Diego—
  - *Bishop School.*
  - High School.

Colorado:
- Denver—
  - East High School.
  - North High School.
  - South High School.
  - West High School.
  - *Miss Wolcott's School.*
- Grand Junction—High School.
- Pueblo—High School.
- Salida—High School.

Delaware:
- Wilmington—*Friends' School.*

District of Columbia:
- Washington—
  - Central High School.
  - *Colonial School.*
  - Eastern High School.
  - *Misses Eastman's School.*
  - *Holton Arms School.*
  - *Miss Madeira's School.*
  - *National Cathedral School.*
  - *Sidwell Friends' School.*
  - Western High School.

Florida:
- Jacksonville—Duval High School.

Georgia:
- Atlanta—
  - Girls' High School.
  - *Washington Seminary.*

Hawaii:
- Honolulu—*Oahu College.*

Idaho:
- Boise—High School.

Illinois:
- Aurora—West Side High School.
- Chicago—
  - Austin High School.
  - Carl Schurz High School.
  - *Faulkner School.*
  - *Francis W. Parker School.*
  - Hyde Park High School.
  - *Illinois Woman's College Academy.*
  - *Kenwood Institute and Loring School.*
  - Lakeview High School.
  - *Latin School.*
  - *Lewis Institute.*
  - Nicholas Senn High School.
  - Parker High School.
  - *Stickney School.*
  - *University High School.*
  - *University School for Girls.*
  - Wendell Phillips High School.
- Evanston—Township High School.
- Godfrey—*Monticello Seminary.*
- Joliet—High School.
- Kewanee—High School.
- Lake Forest—*Ferry Hall.*
- Maywood—Proviso Township High School.
- Mount Carroll—*Frances Shimer School.*
- Oak Park—Oak Park and River Forest Township High School.
- Peoria—High School.
- Rockford—High School.
- Rock Island—High School.
- Wheaton—High School.
- Winnetka—
  - *Girton School.*
  - New Trier Township High School.

Indiana:
- Connersville—*Elmhurst School.*
- Crown Point—High School.
- Fort Wayne—High School.
- Indianapolis—*Tudor Hall.*
- Lafayette—High School.
- Marion—High School.

Iowa:
- Burlington—High School.
- Council Bluffs—High School.
- Davenport—*St. Katharine's Hall.*
- Des Moines—
  - North High School.
  - West High School.
- Dubuque—High School.
- Maquoketa—High School.
- Marshalltown—High School.
- Red Oak—High School.
- Sigourney—High School.
- Sioux City—High School.

- Kansas:
    - Hutchinson—High School.
    - Kansas City—High School.
    - Topeka—
        - *College of Sisters of Bethany.*
        - High School.
    - Wichita—High School.
- Kentucky:
    - Ashland—High School.
    - Danville—*Kentucky College for Women.*
    - Louisville—
        - *Collegiate School.*
        - Girls' High School.
        - *Kentucky Home School for Girls.*
    - Shelbyville—*Science Hill School.*
- Louisiana:
    - New Orleans—Newcomb High School.
- Maryland:
    - Baltimore—
        - *Friends School.*
        - *Girls' Latin School.*
        - Western High School.
    - Reisterstown—*Hannah More Academy.*
- Michigan:
    - Ann Arbor—High School.
    - Battle Creek—High School.
    - Cadillac—High School.
    - Calumet—High School.
    - Detroit—
        - Cass High School.
        - Central High School.
        - *Liggett School.*
    - Grand Haven—*Akeley Hall.*
    - Hancock—High School.
    - Houghton—High School.
    - Kalamazoo—Central High School.
    - Lansing—High School.
    - Saginaw—East Side High School.
    - St. Johns—High School.
- Minnesota:
    - Duluth—Central High School.
    - Faribault—*St. Mary's Hall.*
    - Minneapolis—
        - Central High School.
        - East High School.
        - *Stanley Hall.*
        - West High School.
    - St. Paul—
        - Central High School.
        - *Miss Loomis' School.*
        - *Oak Hall.*
- Mississippi:
    - Natchez—*Stanton College.*
- Missouri:
    - Ferguson—High School.
    - Kansas City—
        - *Miss Barstow's School.*
        - Central High School.
        - Manual Training High School.
        - Westport High School.
    - St. Charles—*Lindenwood College Academy.*
    - St. Louis—
        - Central High School.
        - Grover Cleveland High School.
        - *Hosmer Hall.*
        - *Mary Institute.*
        - Soldan High School.
    - Webster Groves—High School.
- Montana:
    - Lewistown—Fergus County High School.
    - Missoula—High School.
- Nebraska:
    - Lincoln—High School.
    - Omaha—
        - *Brownell Hall.*
        - High School.
    - Wayne—High School.
- New Jersey:
    - Asbury Park—High School.
    - Atlantic City—
        - *Armitage School.*
        - High School.
    - Bernardsville—*St. John Baptist School.*
    - Bloomfield—*High School.*
    - Boonton—*St. John School.*
    - Bridgeton—*Ivy Hall.*
    - Cape May Court House—Middle Township High School.
    - Clayton—High School.
    - Cranford—High School.
    - East Orange—High School.
    - Englewood—
        - *Dwight School.*
        - High School.
    - Glen Ridge—High School.
    - Hackettstown—*Centenary Collegiate Institute.*
    - Hightstown—High School.
    - Jersey City—
        - *Bergen School.*
        - William L. Dickinson High School.
    - Leonia—High School.
    - Madison—High School.
    - Metuchen—High School.
    - Millburn—High School.
    - Montclair—High School.
    - Newark—
        - Barringer High School.
        - Central Commercial and Manual Training High School.
        - South Side High School.
    - New Brunswick—*Miss Anable's School.*
    - Orange—*Dearborn-Morgan School.*
    - Passaic—High School.
    - Paterson—*Collegiate Institute.*
    - Plainfield—High School.
    - Princeton—High School.
    - Ridgewood—High School.
    - Rutherford—High School.
    - Summit—
        - High School.
        - *Kent Place School.*
    - Trenton—State Model High School.
    - Westfield—Washington High School.
    - West Hoboken—Emerson High School.
    - West Orange—High School.
    - Woodbury—High School.
- New York:
    - Albany—
    - *Academy for Girls.*
        - High School.
        - Milne High School.
        - *St. Agnes School.*
        - State Normal College.
    - Albion—High School.
    - Amityville—High School.
    - Amsterdam—High School.

- New York—Continued.
  - Auburn—High School.
  - Aurora—*Wallcourt School.*
  - Ballston Spa—High School.
  - Batavia—High School.
  - Binghamton—Central High School.
  - Brooklyn—
    - *Adelphi Academy.*
    - *Brooklyn Heights Seminary.*
    - Erasmus Hall High School.
    - Girls' High School.
    - Manual Training High School.
    - *Packer Collegiate Institute.*
  - Buffalo—
    - *Seminary.*
    - Central High School.
    - Lafayette High School.
  - Cambridge—High School.
  - Carmel—*Drew Seminary for Young Women.*
  - Catskill—High School.
  - Chatham—Union School.
  - Chautauqua—High School.
  - Clinton—High School.
  - Courtland—State Normal School.
  - Dobbs Ferry—*Misses Masters' School.*
  - Elmira—Free Academy.
  - Flushing—High School.
  - Fulton—High School.
  - Garden City—*St. Mary's School.*
  - Gloversville—High School.
  - Hoosic Falls—High School.
  - Islip—High School.
  - Ithaca—High School.
  - Jamaica—High School.
  - Jamestown—High School.
  - Johnstown—High School.
  - Kingston—Free Academy.
  - Larchmont Manor—*Manor School.*
  - Liberty—High School.
  - Luzerne—Hadley-Luzerne High School.
  - Mamaroneck—Rye Neck High School.
  - Moravia—High School.
  - Mount Vernon—High School.
  - New Brighton—Curtis High School.
  - New Paltz—Normal School.
  - New Rochelle—High School.
  - New York—
    - *Benjamin School for Girls.*
    - *Ethical Culture School.*
    - *Friends' Seminary.*
    - *Horace Mann School.*
    - Hunter High School.
    - Morris Heights High School.
    - *St. Agatha School.*
    - *Miss Spence's School.*
    - *Velten School.*
    - Wadleigh High School.
  - Oneida—High School.
  - Oneonta—High School.
  - Peekskill—Drum Hill High School.
  - Plattsburg—High School.
  - Rensselaer—High School.
  - Roxbury—High School.
  - Richmond Hill—High School.
  - Rochester—
    - *Columbia School.*
    - East High School.
    - West High School.
- New York—Continued.
  - Rye—*Seminary.*
  - Saratoga Springs—High School.
  - Saugerties—High School.
  - Scarsdale—*Lockwood Collegiate School.*
  - Schenectady—High School.
  - Syracuse—
    - Central High School.
    - *Goodyear-Burlingame School.*
  - Tarrytown-on-Hudson—*The Knox School.*
  - Troy—*Emma Willard School.*
  - Utica—Free Academy.
  - Watertown—High School.
  - Waverly—High School.
  - West Hebron—Union School.
  - White Plains—High School.
  - Yonkers—High School.
- Ohio:
  - Akron—Central High School.
  - Ashland—High School.
  - Ashtabula—High School.
  - Bellevue—High School.
  - Canton—Central High School.
  - Cincinnati—
    - *College Preparatory.*
    - Hughes High School.
    - Madisonville High School.
    - *Oakhurst Collegiate School.*
    - *University School.*
- Walnut Hills High School.
  - Cleveland—
    - Central High School.
    - Glenville High School.
    - *Hathaway-Brown School.*
    - Shaw High School.
  - Columbus—
    - *Columbus School for Girls.*
    - East High School.
    - North High School.
  - Coshocton—High School.
  - Dayton—Steele High School.
  - East Cleveland—High School.
  - Elyria—High School.
  - Hamilton—High School.
  - Lima—High School.
  - Medina—High School.
  - Oberlin—*Academy.*
  - Piqua—High School.
  - Sandusky—High School.
  - Toledo—
    - Central High School.
    - Scott High School.
  - Xenia—High School.
  - Youngstown—
    - Rayen High School.
    - South High School.
- Oregon:
  - Portland—
    - *Academy.*
    - Lincoln High School.
- Pennsylvania:
  - Allegheny—High School.
  - Altoona—High School.
  - Beaver Falls—High School.
  - Bellefonte—High School.
  - Ben Avon—High School.
  - Berwyn—Tredyffrin-Easttown High School.

- Pennsylvania—Continued.
  - Bethlehem—
    - *Moravian Parochial School.*
    - *Moravian Seminary.*
  - Bradford—High School.
  - Bryn Mawr—
    - *Baldwin School.*
    - *Miss Shipley's School.*
    - *Miss Wright's School.*
  - California—South Western Normal School.
  - Canton—High School.
  - Carbondale—High School.
  - Chester—High School.
  - Clearfield—High School.
  - Connellsville—High School.
  - Crafton—High School.
  - Du Bois—High School.
  - Easton—High School.
  - Franklin—High School.
  - George School—*George School.*
  - Greensburg—High School.
  - Harrisburg—High School.
  - Indiana—State Normal School.
  - Jenkintown—*Beechwood School.*
  - *Kingston— Wyoming Seminary.*
  - Lancaster—*Shippen School.*
  - Lansdowne—High School.
  - McKeesport—High School.
  - Munhall—High School.
  - Oakmont—High School.
  - Overbrook—*Miss Sayward's School.*
  - Philadelphia—
    - *Friends' Central School.*
    - *Friends' Select School.*
    - *Germantown Friends' School.*
    - Germantown High School.
    - Girls' High School.
    - *Miss Hill's School.*
    - *Temple University.*
    - William Penn High School.
  - Pittsburgh—
    - Central High School.
    - *Dilworth Hall.*
    - Edgewood High School.
    - Peabody High School.
    - *Thurston Preparatory School.*
    - *Winchester School.*
  - Pottsville—High School.
  - Punxsutawney—High School.
  - Ridgway—High School.
  - Scranton—Central High School.
  - Sharon—High School.
  - South Bethlehem—*Bishopthorpe Manor.*
  - Swarthmore—
    - High School.
    - *Mary Lyon School.*
  - Washington—*Seminary.*
  - West Chester—
    - *Darlington Seminary.*
    - High School.

- Pennsylvania—Continued.
  - West Philadelphia—Girls' High School.
  - Westtown—*Boarding School.*
  - Wilkes-Barre—
    - High School.
    - *Institute.*
  - Wilkinsburg—High School.
  - Williamsport—
    - *Dickinson Seminary.*
    - High School.
- South Carolina:
  - Charleston—*Ashley Hall.*
- South Dakota:
  - Aberdeen—High School.
  - Rapid City—High School.
  - Sioux Falls—
    - *All Saints' School.*
    - Washington High School.
- Tennessee:
  - Chattanooga—
    - *Girls' Preparatory School.*
  - Nashville— *Ward-Belmont Seminary.*
    - High School.
- Texas:
  - Dallas—*Misses Holley's School.*
  - El Paso—
    - High School.
    - *School for Girls.*
- Utah: Houston—High School.
  - Ogden—High School.
- Virginia:
  - Chatham—*Episcopal Institute.*
  - Roanoke—*Virginia College.*
  - Staunton—*Mary Baldwin Seminary.*
- Washington:
  - Ritzville—High School.
  - Seattle—
    - Broadway High School.
    - Franklin High School.
    - Queen Anne High School.
  - Spokane—
    - *Brunot Hall.*
    - Lewis and Clark High School.
  - Tacoma—
    - *Annie Wright Seminary.*
    - Stadium High School.
  - Walla Walla—*St. Paul School.*
- West Virginia:
  - Huntington—*Marshall College.*
- Wisconsin:
  - Appleton—High School.
  - Ashland—High School.
  - Beaver Dam—*Wayland Academy.*
  - Fond du Lac—*Grafton Hall.*
  - Kenosha—*Kemper Hall.*
  - Madison—High School.
  - Milwaukee—
    - East Division High School.
    - *Milwaukee-Downer Seminary.*
  - Superior—High School.

Private Secondary Schools in Maryland and Pennsylvania (not Listed Elsewhere in the Bulletin) Belonging to the Association of Colleges and Preparatory Schools of the Middle States and Maryland and having the Privilege of Certificating their Graduates to Various Colleges of High Standing.

Maryland:
- Baltimore—
  - *Arundell School for Girls.*
  - *Bryn Mawr School.*
- Roland Park—*Gilman Country School.*

New York:
- Mohegan—*Mohegan Lake School.*
- New York—
  - *Alcuin Preparatory School.*
  - *Brearley School.*
  - *Collegiate School.*
  - *Franklin School.*
  - *Loyola School.*
  - *St. Agatha.*
- Poughkeepsie—
  - *Riverview Academy.*

Pennsylvania:
- Allentown—*Preparatory School.*
- Haverford—*School.*
- Lancaster—*Yeates School.*
- Lititz—*Linden Hall Seminary.*
- Mercersburg—*Academy.*
- Philadelphia—
  - *Agnes Irwin School.*
  - *Chestnut Hill Academy.*
  - *Germantown Academy.*
  - *Holman School for Girls.*
  - *Maher Preparatory School.*
  - Northeast High School for Girls.
  - (Chestnut Hill)—*Springside.*
- Pottstown—*Hill School.*
- Wayne—*St. Luke's School.*
- York—*Collegiate Institute.*

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1916, No. 21

VOCATIONAL SECONDARY EDUCATION

PREPARED BY THE
COMMITTEE ON VOCATIONAL EDUCATION OF
THE NATIONAL EDUCATION ASSOCIATION

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INTRODUCTORY.

The preliminary report of the committee on vocational education, issued at the Salt Lake meeting of the National Education Association, 1913, gave an account of the appointment of a committee as the result of resolutions passed at the Chicago meeting of the association in 1912. This report contained a statement of what had been accomplished in the few months available before the July meeting. The most important feature of this report was a tentative outline which showed the scope and possibility of the work.

The first question considered by the committee was whether or not a real need existed for its services and whether or not the work planned was a legitimate part of the work of the National Education Association. To establish some definite conclusions regarding this question, an investigation was carried on by the committee by means of a questionnaire to a limited number of the active members of the National Education Association. This questionnaire, briefly setting up the fact of the appointment of the committee, was so arranged as to ascertain rather accurately the opinions of those to whom it was submitted as to the need and desirability of further activity by this committee. The large majority of affirmative answers in reply to this questionnaire seemed to indicate that there was a legitimate field in which positive work could be done.

The investigation was carried still further by a more extended questionnaire on the whole question of vocational education. This was submitted to about 500 members of the National Education Association, and replies were received from nearly one-half of those to whom it had been submitted. The general conclusion drawn from the replies was that there exists a real need for investigation, suggestion, and recommendation in this field, inasmuch as vocational education bears a very positive relation to public welfare. The complete results of this questionnaire were submitted to the National Education Association at its St. Paul meeting, 1914. At the same meeting in St. Paul there was published a proposed terminology prepared by a subcommittee of this committee, consisting of Dr. David Snedden, commissioner of education in Massachusetts, chairman; Mr. C. R. Allen, agent for the State Board of Education in Massachusetts, and the chairman of this committee. This terminology did not attempt to settle the question of definitions; it rather prepared a tentative proposal which might enable persons interested in the introduction of vocational education to clarify their own thinking and their own statements in regard to the work. A revision of this terminology in the light of later criticisms is included in this report.

From time to time meetings of this committee have been held both in connection with the meetings of the National Education Association and in connection with the meetings of the National Society for the Promotion of Industrial Education. At these meetings in most cases a majority of the committee have been present, and it has been possible to consider somewhat carefully plans of work. As in all committee work, it has been necessary, however, for individuals to carry on specific investigations and to make rather definite reports of such investigations.[1] Much of the matter submitted has been referred to persons not members of the committee, and has been revised in view of such suggestions and reactions as have been made by them. It has not been possible to submit each individual document to each individual member of this committee; hence, in the presentation of the following report it should be borne in mind that the specific chapters have been prepared, not by the committee as a whole, but by individual members of the committee or by persons selected by this committee. In planning the work for this volume it was first thought that the whole field should be covered. The extended outline prepared as the first report of the committee, however, was so comprehensive that for practical purposes it seemed utterly impossible to prepare a volume which should contain all the points mentioned. In short, it would appear that there is a growing conviction that the field of vocational education is so replete with possibilities that it is quite necessary that continuous work be carried on both in the field of survey and accomplishment and in the field of suggested forward movement.

In the plans made for the preparation of this volume the idea was presented that it should be prepared for the assistance of those seeking to introduce vocational education into any given community. Through conference it developed that in all probability the superintendents of schools in the several communities throughout the country would be the persons most likely to be interested in the introduction of this type of education. For that reason the objective was to prepare a report which would be of assistance to the average superintendent of schools in a community of ordinary size, were he to feel the need of introducing such work into his home school system. With this limitation the committee set to work to prepare its report. Among the things felt to be especially necessary were a brief historic setting of the work in vocational education, some knowledge of the kinds of schools that have been established in this country, and where these schools may be found, a knowledge of the terms and definitions which seem to be desirable in the work of vocational education for purposes of clearness, a knowledge of how to investigate the need for the work in any given community, a knowledge of how to carry it on after investigation has been made, some reference to the relation between vocational education and vocational guidance, the proper methods of financing the problem, and a statement of possible problems and difficulties which have not been settled and which require further consideration previous to their settlement.

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[1] The material for the following chapters was, in the first instance, assembled by the persons here named: Chapters I and II, by Robert J. Fuller; Chapters III and IX, by David Snedden; Chapters IV and V, by Charles Prosser; Chapter VI, by C. H. Winslow; Chapter VII, by Meyer Bloomfield; Chapter VIII, by A. Lincoln Filene; and the appendix by E. R. Snyder.

The committee which was appointed by the president of the National Education Association at the meeting of the department of superintendence in February, 1913, consisted of educators, social workers, labor representatives, and business men. The widely representative character of the committee was planned for in the original resolutions, passed at the Chicago meeting in 1912. As at present constituted the committee is made up of the following persons:

Robert J. Fuller, chairman, superintendent of schools, North Attleboro, Mass.

David Snedden, State commissioner of education, Boston, Mass.

Arthur D. Dean, chief of the division of industrial education, State of New York.

R. W. Himelich, principal Normal Training School, Cleveland, Ohio.

Charles H. Winslow, director of surveys, Indianapolis, Ind.

Frank Duffy, general secretary United Brotherhood of Carpenters and Joiners, Indianapolis, Ind.

W. B. Prescott,[1] formerly commissioner of International Typographical Union on Supplemental Trade Education, Chicago.

A. Lincoln Filene, treasurer and general manager of William Filene's Sons' Co., Boston, Mass.

Walter D. Sayle, president Cleveland Punch & Shear Works, Cleveland, Ohio.

Miss Julia Lathrop, Chief Children's Bureau, Washington, D. C.

Owen P. Lovejoy, secretary National Child Labor Committee, New York.

Charles A. Prosser, president Dunwoody Institute, Minneapolis, Minn.

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[1] Deceased.

VOCATIONAL SECONDARY EDUCATION.

Chapter I.

HISTORY AND DEVELOPMENT.

The present use of the term "vocation" in the field of education is somewhat more comprehensive than the generally accepted idea of the word. Its earlier adaptation was more particularly to the "callings" or professions. It is almost within the present decade that its fuller meaning has been interpreted. This newer significance has not yet become sufficiently well and widely known to have the educational doctrines which it now includes generally appreciated either by educators or laymen.

In tracing the development of the doctrine of vocational secondary[1] education, it is recognized that, in the earlier American life, handwork of all types was done in the home. It was here that the operator, obliged to know the whole process, turned out small quantities of manufactured articles. Even the young people who were to enter the professions were, for the most part, taught some of the home occupations. The points of contact were so numerous that differentiation was impossible. Whatever of direct instruction for a vocation was to be given was handed from father to son and from mother to daughter. This was not unlike the earlier practices in the European countries. With the increased population and the increased needs in America, it became necessary to produce in still larger quantities. Very naturally, then, did the people of this country turn to the experience of Europe. It was there that the apprenticeship systems, which existed somewhat among the Greeks and Romans and which were most pronounced during the Middle Ages, had become so highly systematized under the guilds. This influence assisted much in the introduction of the apprenticeship system in the United States.

Like the home shop the apprentice shop was soon forced to abandon its plan because of the increasing demands of society. The adjustments required a long series of intervening steps until industry, unable to produce goods in sufficient quantities, profiting again by European experience, adopted the plan for division of labor. This plan necessitated the employment of a certain number of persons highly skilled in several processes of a trade and of a much larger number of persons skilled to the degree of specialization in a single process.

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[1] The word "secondary" in these discussions is used to limit the field. This committee had to do particularly with a consideration of education of less than college grade for persons 14 to 18 years of age. This automatically excludes the professional schools, higher technical schools, etc., as well as elementary schools.

This evolution of industry which took place, not alone in America, but in the European countries as well, although less rapidly, resulted in a more limited supply of skilled workers. This latter fact made it doubly difficult in America, for, on the one hand, her own trained workers decreased in numbers and, on the other hand, the importation of such workers was lessened. Furthermore, many of the workers themselves had been forced for one cause or another to enter industry at an early age. They were obliged to specialize, as in the shoe industry, from cutters and last makers to inspectors of the finished product. They finally found themselves unable and unfit either to advance, to secure a more lucrative position, or to increase their output materially. Dissatisfaction, insufficient training, a lessened quality as well as quantity of work produced, and unrest were the result. This situation forced upon the manufacturer the necessity of a source of supply of labor and at the same time forced upon many of the workers the necessity of securing some form of instruction or type of work which would enable them in later years to increase their earning capacity.

So far as can be determined, the American manufacturer at the time of the Centennial Exposition at Philadelphia sensed for the first time the fact that abundant resources alone were insufficient to enable him to compete in the European markets with European goods or in the home market against these same goods. It was here that the American producer had his first opportunity to compare the products and workmanship in his own factory or shop with those of foreign producers. It is an historic fact that schools for art in industry were soon established in several manufacturing centers. Thus was the way opened for manual training, which was started in several of the larger centers before the expiration of another decade.

The lay public who had been educated under the theory of abundant mind training through the faculties were ready to accept the plan. They believed that through it would be derived a practical education, using practical in the sense of earning a livelihood. The more conservative were convinced of its value when it was explained that concentration, coordination of hand and brain, etc., would result. It required many years of experimentation to show the fallacy of the reasoning that hand training in general, however skillfully organized in successive steps, and however carefully correlated with intellectual attainment, would actually function in any specific occupation unrelated to the work previously performed.

It required the initiative of a man of large affairs, a man of industry, to inaugurate a movement to supply this deficiency. The governor of Massachusetts recommended to the legislature of 1905 an investigation and report upon the needs for industrial education in that State. A commission was appointed. Its report brought about drastic legislation, setting up in the first place an independent State body whose duty was to promote the interests of industrial education in the State. Additional legislation made possible the introduction of industrial education in a given locality with State aid on a graduating scale from 20 per cent to 50 per cent of actual expenditure for maintenance.

Other legislation of a positive nature followed. A commission was appointed the following year in Wisconsin. As a result of its report the Wisconsin Legislature adopted plans for vocational education in 1907 and 1911. New York established laws for vocational education in 1908.

The following diagram has been prepared after careful study of the statutes of the several States. In many cases it has been somewhat difficult to determine whether or not vocational secondary education was permissible in any given State. This is all the more difficult in view of the fact that it is known to members of the committee that in some of the States in which there seem to be no laws providing specifically for vocational education certain types of vocational secondary education are being carried on at local public expense. In preparing this diagram, however, it was assumed that the statutes were a statement of fact and prima facie evidence that vocational secondary education was not legally recognized by the State in question.

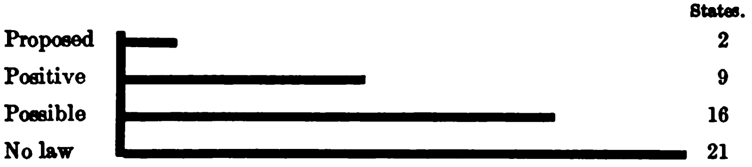

DIAGRAM 1.—Laws for vocational secondary education, distribution by States.

According to the diagram[1] there are 2 States at the present time in which it is proposed to pass laws bearing directly upon vocational secondary education; there are 9 States which have already passed laws aimed directly toward the introduction of vocational secondary education; there are 16 States in which under the present statutes, so far as can be ascertained from the statutes themselves, it would be possible to introduce some form of vocational secondary education; there are 21 States in which it would appear that there are no statutes having any direct reference to the introduction of vocational secondary education. In fact in these States it may be seriously questioned whether or not vocational secondary education could be introduced without a modification of the statutes.[1]

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[1] The States included in each of these classifications have been listed and will be furnished upon request to the Bureau of Education or to the committee.

Since 1908, as shown in the diagram, 7 other States have passed laws which have a direct bearing upon the question of industrial education.[2] As a result, in most of these laws the State subsidizes the local community in carrying forward the work, provided the local authorities conform to certain rather definite requirements. Several other States have asked the National Society for the Promotion of Industrial Education to suggest legislation. As this bulletin goes to press there is a strong probability that Federal aid to vocational education will be granted by Congress. Hence it will be seen that within one decade the United States Government and a considerable number of the States of the Union have taken active measures toward introducing ways and means to provide additional education for those persons over 14 years of age who must of necessity enter some trade or enter industry.

That this demand for a type of education which shall correspond somewhat to life's activities is more than a mere whim is borne out by the extent of legislation already passed concerning manual training and household arts. In nearly every State these subjects are recognized as a legitimate part of public education. In by far the greater majority of these States work in both subjects is carried on in the schools. Despite the fact that in several of the States in which these subjects were introduced there is a feeling that they often fail to function in the lives of the pupils, the number continues to increase. In some of these States, however, this partial failure to reach the desired end has brought about commissions and laws looking toward a type of education which shall train for a specific purpose, that purpose to be easily recognized by the student and his parents.

Even the work in agricultural education, which has been fostered by the United States Government for many years, seemed to lack somewhat the necessary qualities to make it actually efficacious in producing boys who can farm. The courses in this subject in many of the high schools were often purely textbook courses given in the abstract with practically no relation between the classroom work and the boy's job at home. Many times a modification of this textbook course resulted in so-called laboratory courses in agriculture which went little beyond the analysis of a few types of soil and the suggestion as to possible crops which might be propagated thereon. Boys on the farm were very rightly dissatisfied with this type of education, consequently many of them left their homes to gain a higher education which might be secured at some college. Those of them who had sufficient vision to see the possibilities of farm life often went, to be sure, to the agricultural colleges which have done effective work for a considerable number of years; others with less vision felt that the professional pursuits were more advantageous to them from an intellectual and social as well as a financial standpoint. The parents of these boys gradually found that their farms were being deprived of the more intelligent among the youth of their community. Consequently, dissatisfaction with this sort of thing became quite prevalent. Very naturally, then, in certain communities there was a willingness to provide a type of agricultural education, even, which should actually train a boy to do real farm work.

---

[1] Mr. John A. Lapp, of Indiana, who has made a study of the constitutions of the several States, has found that in some cases at least it will be necessary to amend the constitution of the State before vocational secondary education can be introduced.

[2] See Appendix for digest of these laws.

Instruction for the girls in these rural communities was even less satisfactory than that for the boys. They were all taught the common-school branches, with a little algebra, possibly some geometry, and, if the community was large enough, a little Latin and one modern language—subjects no one of which was designated to assist them in making themselves better homemakers or give them in large numbers a broader outlook upon the possibilities of home life, industrial life, or agricultural life in general.

In those communities where domestic-science courses were offered, the training was general and had no particular bearing upon the lives of the girls in their own homes. In many communities the appropriation was too meager to make this work actually meet conditions of the home. It is only within a very few years that definite projects have been set up for girls in rural communities which are interesting and which involve their ordinary daily activities. At the present time, however, the improved opportunities in the rural communities are having a wide influence upon this work in the country at large.

It would appear, then, from the foregoing facts and conditions that vocational education has not been a mere passing fancy or a project of an individual mind; it has had a definite and rather positive growth until, whether educators or laymen wish it or not, certain definite types of vocational education will be demanded by the fathers and mothers of the boys and girls in the schools for the direct purpose of fitting these boys and girls to take their right place in life. As has been previously stated, already several States have undertaken the solution of this problem through legislation. It may be possible that such legislation is only tentative; it must of necessity be subject to constant revision and constant amendment. Nevertheless, the fact remains that these States at least recognize the need for this particular type of education in order to provide an equal opportunity for all.

Chapter II.

TYPES OF VOCATIONAL SECONDARY SCHOOLS.

A directory of secondary vocational schools now in operation in the several States is printed on pages 22–32 of this bulletin. It was compiled after a careful and detailed analysis of the several types of vocational schools. This analysis included also the industrial arts, commercial arts, practical arts, and technical schools, as well as the vocational schools. The following is the analysis as sent to each individual school, including the detailed description of each type of school which accompanies it.

NATIONAL EDUCATION ASSOCIATION.

COMMITTEE UPON VOCATIONAL EDUCATION AND VOCATIONAL GUIDANCE.

R. J. Fuller, Chairman, North Attleborough, Mass.

You are asked to fill in the name of your school as indicated. In order that we may know how to classify your school in our list, you are also asked to check in the following list the type which your particular school comes nearest to fitting.[1] Kindly return this sheet to the committee at your earliest convenience.

ANALYSIS OF TYPES OF VOCATIONAL SCHOOLS IN THE UNITED STATES.

A. Agricultural Schools.
    I. Vocational agricultural day school.
        (*a*) Part-time agricultural school.
    II. Practical arts agricultural school.
    III. Farm extension school.
B. Commercial Schools.
    I. Vocational commercial day school.
        (*a*) Part-time commercial school.
    II. Commercial arts school.
    III. Evening commercial school.
        (*a*) Vocational commercial evening school.
        (*b*) Commercial arts evening school.
C. Industrial Schools.
    I. Vocational industrial day school.
        (*a*) Vocational part-time industrial school.
    II. Evening industrial school.
        (*a*) Vocational extension industrial school.
        (*b*) Vocational preparatory industrial school.
    III. Industrial arts school.

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[1] See booklet for complete statement of this analysis.

C. Industrial Schools—Continued.
  IV. Continuation industrial school.
    (*a*) Extension industrial continuation school.
    (*b*) Preparatory industrial continuation school.
D. Homemaking Schools.
  I. Vocational homemaking day school.
    (*a*) Part-time homemaking school.
  II. Evening homemaking school.
    (*a*) Vocational extension homemaking school.
    (*b*) Vocational preparatory homemaking school.
  III. Household arts school.
E. Technical High School.

Town or City-------------------------------------*State*------------------
Date-------------------------*Name of School*------------------------------
Where located-----------------------------------*Street.*
Answered by--

ANALYSIS OF TYPES OF VOCATIONAL SCHOOLS IN THE UNITED STATES.

This analysis is based, as nearly as possible, both upon actual practice and general terms which are being used in the various parts of the country to distinguish between the several types of education involved.

You are asked to classify your particular school in accordance with this plan. In case none of the descriptions seem to fit your individual conditions, kindly make your own classification, telling us where in your opinion it should be placed in this scheme.

A. AGRICULTURAL SCHOOLS.

Agricultural schools are those schools in which the teaching of some form of agriculture is made the prominent feature:

I. **Vocational Agricultural Day School.** Vocational agricultural day school is one in which the instruction is given in the daytime and under the real conditions of farm life. That is to say, the student must actually perform work upon land, or with stock or fruit, which work is productive and will teach him the actual operations involved.

These schools may be high schools devoting their entire time to agricultural education in this definite way, or to a study about the operations involved in the school time. This type of education may also be conducted as a department in a high school having other departments, such as preparatory courses, etc.

(*a*) Part-Time Agricultural School. Part-time agricultural education will be that form of education in which the pupil attends school one-half of the time, or thereabouts, and actually performs work upon farm projects the remaining portion of his time. His experience on the farm must be real productive experience.

II. **Practical Arts Agricultural School.** In these schools the work in agriculture will be of much more general nature than will that in the preceding schools. Under this head should be classified schools which offer work in home gardens or school gardens, which offer courses from agriculture textbooks without actual practical farm experience, and those which offer courses for the development of appreciation and interest in farming, or agriculture in general.

III. **Farm-Extension School.** It is known that farm-extension courses are provided through revenue from the United States Government in practically all of the States in the country. Such courses are offered for the benefit of persons now engaged in farm work and are not confined to age limitations. This committee desires to know if such work is carried on in the communities receiving this questionnaire.[1]

B. COMMERCIAL SCHOOLS.

Commercial schools are those schools in which the teaching of bookkeeping, stenography and typewriting, salesmanship, buying, filing, and general office practice are the controlling courses taught in the school.

I. **Vocational Commercial Day School.** In this type of school there will be offered either a two or four year course in such subjects as are indicated in the preceding description. So far as may be possible the real conditions of trade will be duplicated. The entire instruction will be carried on in the school. These schools may be conducted in some cases as a part of the four-year commercial course so-called in some high schools. When so conducted, a positive distinction should be made between the work which is of a general character and is often offered during the first two years of the course, and that work which is of a more specific character and is offered for the purpose of training the students to become workers in the commercial field.

These schools may be known as commercial high schools devoting their entire time to commercial education or, as indicated above, they may form a part of the regularly conducted high school as a single department in that school.

(*a*) Part-Time Commercial School. Part-time commercial education is no doubt conducted in some communities. It is that form of education in which the pupil attends school a portion of the time and actually performs work in an office for the remaining portion of his time. The work carried on in the schools should be closely related to the work which is being carried on in the office. The office experiences must be real experiences and sufficiently varied to give the pupil an idea of general office practice.

II. **Commercial-Arts School.** In these schools the work in the commercial branches will be of a more general nature than that in the preceding schools. In addition to the work in the commercial subjects, there will in all probability be offered work in the general subjects of the school curriculum. In some instances, instead of real problems which the student is likely to meet in life, he will be studying general textbooks about commercial work and the way in which that work is carried on.

These courses or schools may be organized for the purpose of enabling the pupil to test out his own interest or desire for work of this nature. The courses may also be offered for certain pupils who desire to add to their general education the specific accomplishment of ability to use stenography or the typewriter.

III. **Evening Commercial Schools.** These schools may also be of the two types already described.

(*a*) Vocational Evening Schools. Those known as the vocational evening schools in which the entire emphasis is placed upon the acquisition of some specific form of commercial work, as the use of typewriting and stenography.

(*b*) Commercial-Arts Evening School. The commercial-arts course in the evening school in which a general acquaintance with commercial subjects is all that is expected to be accomplished by the course.

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[1] It is not known to this committee that evening courses in agriculture exist in any part of the country. If they do exist, they should be classified either as practical-arts or farm-extension courses. Kindly classify any which you may have in this particular way.

C. INDUSTRIAL SCHOOLS.

Industrial schools are those schools in which the teaching of some trade, or parts of trades, constitutes the work of the schools. These schools may include such work as carpentry, mining, and training of teamsters, printers, barbers, etc.

I. **Vocational Industrial Day School.** The vocational industrial day school is one in which the instruction is given in the daytime. So far as possible the actual conditions of the shop are duplicated. The product made is marketable. The student performs work which is productive at the same time that he is learning the operations involved.

These schools may be of the nature of high schools which devote their entire time to instruction in trades. They may give both what might be called elementary instruction in the vocation, admitting pupils at 14 years of age, or they may give advanced instruction, admitting pupils at 16 years of age. The control of the instruction in these schools, whether the work is done in school or shop, is directly in the hands of the school.

(*a*) Part-Time Vocational Industrial Schools will be those schools in which a considerable portion of the time, nearly one-half, is given to the instruction in the school itself, and the other one-half to the earning of wages in a shop. In this type of school usually there is a definite effort to make the school responsible to a considerable extent for the shopwork, although the responsibility may be equally divided. For this classification, however, these facts need not be considered.

II. **Evening Industrial School.** The evening industrial school will be a school in which the instruction in the trade or occupation is carried on in the evening. The work in the school may consist either of the short unit course or of the progressive course of instruction. In these schools there will be usually admitted only those persons who are actually engaged in the industry for which the instruction is given.

(*a*) Vocational Extension Industrial School. In case the instruction is in a field corresponding to that in which the person is engaged, the school will be called an Extension Industrial School.

(*b*) In case the work in the school is different from that in which the student is employed, and is for the purpose of giving him a new trade, the school may be called a Preparatory Industrial School.

III. **Industrial Arts School.** In these schools work closely allied to the industries—that is to say the trades and occupations—will be given. There will not be any direct attempt to teach a vocation through the instruction given. The thought that will underlie the work is to provide the pupil with experience, which experience will enable him to know something of certain occupations, and which may result in enabling him to choose wisely for his own vocation. They do not offer specialized courses of work. They are sometimes known as Pre-Vocational Schools. Another object which may underlie these schools will be the development of appreciation and interest in certain specified industries.

IV. **Continuation Industrial School.** Continuation industrial schools are those schools made up, for the most part, of students who spend the greater portion of their time in the industry, but who are obliged up to the age of 18 years to attend school a few hours per week (in no case less than four hours). Like the evening industrial school, they may be separated into two types:

(*a*) Extension Industrial Continuation Schools, in which the instruction in the school is about the work which the student is doing in the daytime, or is closely related to that work.

(*b*) Preparatory Industrial Continuation Schools, in which the pupil takes subjects entirely foreign to those related to his everyday experiences and learns a new trade or occupation.

D. HOMEMAKING SCHOOLS.

Homemaking schools are those schools in which the activities of the home are actually taught. They may include cooking, sewing, millinery, and the like.

I. **Vocational Homemaking Day School.** In these schools the greater portion of the work will bear directly upon the occupation of the home. The school may be conducted as a separate girls' school, or it may be conducted as a department in a high school.

(*a*) Part-Time Homemaking School. Part-time instruction in these schools will consist of a study of the subject of homemaking in the school and the actual practice of homemaking in the home.[1]

II. **Vocational Evening Homemaking School.** As in the case of other evening schools, evening homemaking schools will be carried on for the purpose of giving definite instruction in homemaking. The work in these schools may consist of short-unit courses or of progressive courses of instruction. Into these schools will be admitted those persons, usually women, who wish to become proficient in homemaking.

(*a*) In case the students in the schools are employed during their working hours in occupations other than homemaking, such as clerks or stenographers, the school may be called a Preparatory Homemaking School.

III. **Household Arts School.** The work in these schools will be given for the purpose of enabling the students to become acquainted with the various activities found in the home. The aim of the course will tend to be somewhat general rather than specific. The thought that will underlie the work will be to furnish the student with an actual experience. This experience will serve as a basis for choice of vocation and may be of considerable value in the actual work of homemaking.

Usually these schools will not be organized apart from the ordinary high school, but will be single courses in these schools. They may be considered as prevocational in the sense that the work and instruction will be more inclined to be general than specific. The courses offered in the various schools will be designated as courses in domestic economy, domestic science, household arts, and the like.

E. TECHNICAL HIGH SCHOOLS.

Technical High School. These schools are the schools which were organized largely as a result of the movement for manual training in the schools. They offer general courses in machine working, woodworking, and other forms of manual work. The academic work is also somewhat closely related to the work carried on in the shops. In most cases and more particularly in the first two years of these schools, the academic work is general rather than specific. There would probably be very little direct effort to teach specific occupations. These schools sometimes may be said to prepare pupils for the higher technical schools and for courses in engineering in these higher technical schools.

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[1] These schools may also serve the purpose of training bakers and that class of workers whose occupations may be said to relate closely to that of homemaking.

LOCATION OF VOCATIONAL SCHOOLS.

The following tables were made directly from the replies to the questionnaire which was sent to the State departments and to the individual schools. In other words, as far as possible, each school listed in the accompanying tables has been placed there by the authority of some person directly in charge of the school. This has prevented the committee from arbitrarily setting up and listing, or attempting to determine, the exact type to which a school belonged.

The data are as accurate as could be made from the material available. There is no thought of making the tables inclusive or absolutely correct. Any omissions that may have occurred have resulted from: First, failure to reply to the questionnaire; second, some schools already in operation may not have been known to the committee; and third, in the progress of the movement new schools are continually being established. Obviously it has been impossible to include in this list all of the commercial arts schools, household arts schools, industrial arts schools, technical high schools, as well as departments of these various types which are carried on quite generally in the United States. These schools have been purposely omitted, because this book is devoted mainly to the interests of vocational education, and it is generally recognized that schools of this type can not be classed as vocational schools.

It should be mentioned also that some omissions are due to the fact that State departments of education were unaware that certain types of vocational schools were in operation in the communities within their own States; nor is this a result of negligence, as many such schools are maintained wholly by local taxation and are carried on under local management. In some cases also States reporting, because of an insufficient amount of funds at their disposal, have been unable to make accurate investigations or to prepare sufficient data to provide statistics for specific types of education. For these reasons it is almost sure to follow that a vocational school true to some of the types indicated in this analysis may have been carried on for a considerable period without the full recognition of those who have been attempting to determine just where vocational education is at its greatest development. In other instances schools which have been doing successful work as vocational schools, but which are conducted under a separate foundation or as semiprivate institutions, have not been considered as within the province of the work of this committee. It is clear, therefore, that more of the several types of schools exist than are here recorded, and the officers of such schools should communicate with this committee, providing the necessary data for classification if they wish consideration in future lists. In case it seems unwise for the committee to continue this form of investigation and report, the data will be turned over to the United States Bureau of Education or some other ogranization prepared to carry on this investigation permanently.

In the preparation of these lists no effort has been made to give the exact location of the school beyond the town or city and State in which it is situated. Any other method would add materially to the length of the tables and to the cumbersomeness of the report.

Location of vocational schools.

Cities and villages.	Agricultural.				Commercial.					Industrial.							Homemaking.					Technical high school.
	Vocational agricultural.		Practical arts agricultural.	Farm extension.	Vocational commercial.		Commercial arts.	Evening commercial.		Vocational industrial.		Evening industrial.		Industrial arts.	Continuation industrial.		Vocational homemaking.		Evening homemaking.		Household arts.	
	Day.	Part time.			Day.	Part time.		Vocational.	Commercial arts.	Day.	Part time.	Extension.	Preparatory.		Extension.	Preparatory.	Day.	Part time.	Extension.	Preparatory.		
CALIFORNIA.																						
Los Angeles	X					X		X		X	X	X	X	X				X	X	X		X
San Francisco					X	X	X	X			X										X	X
COLORADO.																						
Denver								X	X			X	X	X					X	X	X	X
CONNECTICUT.																						
Bridgeport										X	X											
New Haven						X				X		X	X		X	X	X		X	X		X
FLORIDA.																						
St. Augustine							X															
ILLINOIS.																						
Chicago					X				X	X	X			X			X				X	X
INDIANA.																						
Anderson												X								X		
Brazil																		X		X		
Crawfordsville																			X	X		
Brookville																		X				
Carlisle																		X	X	X		
Columbia City																				X		
Evansville												X					X		X	X		
Fort Wayne										X		X					X		X	X		
Greencastle																			X			
Hammond												X										

Indianapolis										×	×	×						×	×	×		
Muncie																		×	×	×		
Poseyville																		×	×			
Richmond												×										
Salem																		×	×			
South Bend										×												
Terre Haute												×						×				
Worthington																		×	×			
IOWA.																						
Des Moines					×					×						×						
Dubuque			×		×			×					×	×					×		×	
KANSAS.																						
Leavenworth							×							×			×				×	
MASSACHUSETTS.																						
Ashfield	×																					
Attleboro													×									
Beverly										×												
Boston										×			×				×			×		
Brimfield	×																					
Bristol County	×			×																		
Cambridge										×			×							×		
Chicopee													×									
Clinton	×																					
Concord	×																					
Easton	×																					
Essex County	×			×																		
Everett													×							×		
Fall River													×							×		
Hadley	×																					
Harwich	×																					
Holyoke										×			×							×		
Lawrence										×			×							×		
Lowell										×			×				×			×		
Marlboro	×																					
Methuen																				×		
Natick																				×		
New Bedford										×			×				×			×		
Newton										×			×				×			×		×
Northampton	×									×							×					
North Attleboro													×							×		
Petersham	×																					
Quincy										×			×							×		
Somerville										×							×			×		
Springfield										×												×
Sutton	×																					
Taunton													×							×		
Wakefield																				×		
Walpole																				×		

Cities and villages.	Agricultural.				Commercial.					Industrial.							Homemaking.					Technical high school.
	Vocational agricultural.		Practical arts agricultural.	Farm extension.	Vocational commercial.		Commercial arts.	Evening commercial.		Vocational industrial.		Evening industrial.		Industrial arts.	Continuation industrial.		Vocational homemaking.		Evening homemaking.		Household arts.	
	Day.	Part time.			Day.	Part time.		Vocational.	Commercial arts.	Day.	Part time.	Extension.	Preparatory.		Extension.	Preparatory.	Day.	Part time.	Extension.	Preparatory.		
MASSACHUSETTS—continued.																						
Watertown																				×		
Westfield										×			×									
Worcester										×			×							×		
MICHIGAN.																						
Detroit					×	×		×				×			2							×
Muskegon																						×
MINNESOTA.																						
Minneapolis										×	×	×	×	×	×	×						
MISSOURI.																						
Ozark			×																			
NEW HAMPSHIRE.																						
Berlin							×							×							×	
Colebrook			×				×														×	
Concord							×														×	×
Keene							×							×							×	
Lebanon														×							×	
Portsmouth							×							×							×	
NEW JERSEY.																						
Atlantic County:																						
Atlantic City							×		×	×				×			×				×	
Egg Harbor City														×								
Hammonton							×							×								
Pleasantville																						
Atlantic County vocational school	×	×		×																		

Bergen County:																						
Bergenfield														×						×	×	
Carlstadt														×								
Cliffside Park							×							×						×		
Cresskill														×								
Dumont														×						×		
East Rutherford														×						×		
Edgewater																						
Englewood							×							×							×	
Fairview Borough														×						×		
Garfield														×								
Hasbrouck Heights							×							×								
New Barbadoes							×							×						×	×	
Oradell														×						×		
Park Ridge							×							×						×		
Ramsey														×						×		
Ridgefield Park							×							×						×	×	
Ridgewood														×						×	×	
Rutherford							×							×						×		
Tenafly														×						×		
Union Township														×						×		
Camden County:																						
Camden							×							×						×	×	
Collingswood							×							×						×		
Haddonfield							×							×						×		
Merchantville														×						×		
Pensauken Township														×						×		
Cape May County:																						
Cape May City							×							×						×		
Ocean City							×							×						×		
Wildwood							×							×						×		
Cumberland County:																						
Bridgeton							×															
Landis Township							×							×						×		
Millville							×							×						×		
Essex County:																						
Belleville							×															
Bloomfield							×							×						×		
Caldwell							×							×						×		
Cedar Grove Township														×						×		
East Orange							×							×						×	×	
Glen Ridge							×							×						×	×	
Millburn							×							×						×		
Montclair							×							×					×	×	×	
Newark					×		×	×	×	×		×	×	×			×		×	×	×	×
Nutley							×						×	×						×	×	
Orange							×			×				×			×		×		×	
South Orange							×						×	×						×	×	
Verona							×							×						×		
West Orange							×							×						×	×	
Essex County vocational school										×		×					×		×			

Location of vocational schools—Continued.

Cities and villages.	Agricultural.				Commercial.					Industrial.							Homemaking.					Technical high school.
	Vocational agricultural.		Practical arts agricultural.	Farm extension.	Vocational commercial.		Commercial arts.	Evening commercial.		Vocational industrial.		Evening industrial.		Industrial arts.	Continuation industrial.		Vocational homemaking.		Evening homemaking.		Household arts.	
	Day.	Part time.			Day.	Part time.		Vocational.	Commercial arts.	Day.	Part time.	Extension.	Preparatory.		Extension.	Preparatory.	Day.	Part time.	Extension.	Preparatory.		
NEW JERSEY—continued.																						
Gloucester County:																						
Franklin Township														×						×		
Glassboro							×							×						×		
Pitman														×						×		
Swedesboro							×							×						×		
Woodbury							×							×						×		
Hudson County:																						
Bayonne							×			×		×							×			
Hoboken							×			×			×	×			×		×	×		
Jersey City							×			×		×	×	×			×		×	×	×	
Kearny							×							×							×	
Town of Union							×							×						×		
Weehawken														×						×		
West Hoboken							×							×						×		
West New York														×						×		
Mercer County:																						
Ewing Township														×								
Hamilton														×								
Princeton							×							×						×		
Trenton							×							×						×	×	
Middlesex County:																						
Cranbury														×								
Dunellen														×								
Highland Park														×								
Jamesburg							×							×								
Metuchen							×							×								
Milltown														×								
New Brunswick							×							×								
Perth Amboy							×							×							×	
Roosevelt Borough														×							×	
South Amboy							×							×								

South Brunswick														X								
South River							X							X							X	
Woodbridge							X							X							X	
Middlesex County vocational school										X		X							X			
Monmouth County:																						
Asbury Park							X							X							X	
Atlantic Highlands							X							X						X		
Belmar														X						X		
Freehold							X							X						X	X	
Long Branch							X							X							X	
Manasquan							X							X						X		
Middletown Township							X							X							X	
Red Bank							X							X							X	
Sea Bright														X						X		
Morris County:																						
Boonton							X							X						X		
Butler							X							X						X		
Dover							X							X						X		
Hanover Township (Morris Plains)														X							X	
Madison							X							X						X	X	
Mendham Borough														X						X	X	
Mendham Township														X						X	X	
Morristown							X							X						X	X	
Morris Township														X							X	
Riverdale (Pequannock Township)														X								
Ocean County:																						
Lakewood							X							X							X	
Point Pleasant							X							X								
Passaic County:																						
Little Falls														X							X	
Passaic City							X			X	X	X	X	X			X		X	X	X	
Paterson							X					X	X	X					X	X	X	
Pompton Township														X							X	
Salem County:																						
Norma														X						X		
Pittsgrove														X								
Salem City							X							X						X		
Somerset County:																						
Bernardsville							X							X							X	
Bound Brook							X							X						X		
North Plainfield							X							X							X	
Somerville							X							X						X	X	
Sussex County:																						
Franklin Furnace					X					X				X			X				X	
Hamburg							X							X								
Newton							X							X							X	
Union County:																						
Cranford							X							X							X	
Elizabeth							X							X						X	X	
Linden							X							X						X		

Location of vocational schools—Continued.

Cities and villages.	Agricultural.				Commercial.					Industrial.							Homemaking.					Technical high school.
	Vocational agricultural.		Practical arts agricultural.	Farm extension.	Vocational commercial.		Commercial arts.	Evening commercial.		Vocational industrial.		Evening industrial.		Industrial arts.	Continuation industrial.		Vocational homemaking.		Evening homemaking.		Household arts.	
	Day.	Part time.			Day.	Part time.		Vocational.	Commercial arts.	Day.	Part time.	Extension.	Preparatory.		Extension.	Preparatory.	Day.	Part time.	Extension.	Preparatory.		
NEW JERSEY—continued.																						
Plainfield							×							×						×	×	
Rahway							×							×							×	
Roselle							×							×						×		
Roselle Park							×							×						×		
Springfield														×						×		
Summit							×							×							×	
Township of Hillside														×						×		
Union Township														×						×		
Westfield							×							×							×	
Warren County:																						
Phillipsburg							×							×							×	
Washington							×							×						×		
NEW MEXICO.																						
Hope			×	×																		
Raton							×			×				×							×	
NEW YORK.																						
Albany										×		×					×		×			
Albion	×																					
Alden	×		×				×														×	
Au Sable Forks	×																×		×	×		
Belfast	×																					
Belleville	×																					
Brooklyn												×										
Brushton	×																					
Buffalo			×		2			3	2	5	1	10	3	4	2		3		19	3	2	2
Canandaigua	×				×					×							×					
Cherry Valley	×																					
De Ruyter	×																					

East Syracuse					×					×											×	
Ellisburg	×																					
Elmira										×		×					×		×	×		
Gloversville					×					×												
Gowanda	×																×				×	
Greene	×																×				×	
Greigsville	×			×													×					
Hamburg	×																×				×	
Hammondsport	×																					
Hannibal		×																×				
Herkimer					×					×							×					
Highland		×																×				
Interlaken	×																					
Ithaca					×				×			×					×		×		×	
Jamestown							×	×						×			×					
Jordan			×																			
Lansingburg							×		×					×			×				×	
Le Roy	×				×												×					
Liberty			×				×															
Little Valley	×																					
Long Island City					×	×		×		×	×						×	×	×		×	×
Lowville			×	×			×														×	
Mexico	×																					
Millbrook	×																×					
Monticello	×				×												×					
Moravia			×																			
Mount Vernon					×			×				×		×					×		×	
Newark Valley	×																					
New York City										3		3	2		×							
North Tarrytown							×			×							×					
Olean										×												
Painted Post																					×	
Perry	×																					
Prattsburg	×																					
Red Creek	×																					
Rochester										3			3				×		×	×		
Schenectady								×	×			×	×			×			×	×	×	×
Sinclairville	×																×					
Solvay					×		×		×	×		×		×			×		×	×	×	
Spencerport	×																					
Stamford	×																×					
Syracuse																						×
Troy					×	×		×		×							×					
Utica														3							3	
Walton			×				×										×					
Waterford										×							×					
Wellsville										×							×					
Worcester	×																					
Wyoming	×																×					
Yonkers										×		×	×				×					

Cities and villages.	Agricultural.				Commercial.					Industrial.							Homemaking.					Technical high school.
	Vocational agricultural.		Practical arts agricultural.	Farm extension.	Vocational commercial.		Commercial arts.	Evening commercial.		Vocational industrial.		Evening industrial.		Industrial arts.	Continuation industrial.		Vocational homemaking.		Evening homemaking.		Household arts.	
	Day.	Part time.			Day.	Part time.		Vocational.	Commercial arts.	Day.	Part time.	Extension.	Preparatory.		Extension.	Preparatory.	Day.	Part time.	Extension.	Preparatory.		
NORTH DAKOTA.																						
Beach			×	×																		
Bismarck							×							×							×	
Carrington	×																					
Ellendale														×							×	
Fargo			×	×						×				×			×	×			×	×
Grafton			×				×							×							×	
La Moure			×											×							×	
Velba	×				×												×					
Wahpeton										×							×					
OHIO.																						
Cleveland			×	×	×		×	×		×		×		×			×		×			
OKLAHOMA.																						
Oklahoma City					×	×								×			×	×				
PENNSYLVANIA.																						
Altoona										×		×							×		×	
Cambridge Springs	×																					
Easton																		×	×			
Elders Ridge	×																×					
Ellsworth												×						×	×			
Erie												×						×	×			
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Honesdale	×				×																	
Johnstown												×	×						×			
Lampeter Township	×																					
Locust Gap												×										
Lykens												×										

Mansfield	×																					
Mercer	×																					
Montrose	×	×															×	×				
Mount Carmel												×										
Mount Pleasant					×									×							×	
Nanticoke								×				×	×								×	
Newport Township												×										
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Pittsburgh					2		2	2		×		2	×	2			×			×	2	×
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RHODE ISLAND.																						
Providence																						×
TEXAS.																						
Austin							×		×					×								
College Station	×			×																		
Fort Worth							×							×							×	
Galveston														×								
UTAH.																						
Ogden		×				×																
WASHINGTON.																						
Seattle							×							×							×	
Spokane							×							2							2	
Tacoma	×				×									×							×	

Cities and villages.	Agricultural.				Commercial.					Industrial.							Homemaking.					Technical high school.
	Vocational agricultural.		Practical arts agricultural.	Farm extension.	Vocational commercial.		Commercial arts.	Evening commercial.		Vocational industrial.		Evening industrial.		Industrial arts.	Continuation industrial.		Vocational homemaking.		Evening homemaking.		Household arts.	
	Day.	Part time.			Day.	Part time.		Vocational.	Commercial arts.	Day.	Part time.	Extension.	Preparatory.		Extension.	Preparatory.	Day.	Part time.	Extension.	Preparatory.		
WISCONSIN.																						
Appleton							×							×	×	×			×		×	
Beaver Dam																×			×	×		
Beloit					×													×				×
Chippewa Falls									×						×	×			×	×		
Cudahy															×	×			×	×		
Eau Claire					×	×				×	×			×			×	×				
Fond du Lac					×	×									×	×	×	×				
Grand Rapids							×							×	×	×			×	×	×	
Green Bay							×							×	×	×			×	×	×	
Janesville							×							×	×	×			×	×		
Kenosha							×							×	×	×					×	
La Crosse							×							×	×	×			×	×		
Madison							×							×	×	×			×	×		
Manitowoc						×						×			×	×			×	×	×	
Marinette									×			×							×			
Marshfield															×	×			×	×		
Menomonie							×	×				×							×	×		
Menosha							×							×	×	×			×	×	×	
Milwaukee							×			×	×	×	×		×	×		×	×	×	×	×
Neenah							×	×				×	×	×	×	×					×	
Oshkosh							×							×	×	×			×	×	×	
Racine					×		×	×	×					×	×	×			×	×	×	
Sheboygan					×		×	×	×					×	×	×			×	×	×	
South Milwaukee											×				×	×				×		
Stevens Point							×							×	×	×			×	×	×	
Superior							×	×	×					×	×	×			×	×	×	
Two Rivers						×						×			×	×			×	×	×	
Wausau					×		×	×	×					×	×	×			×	×	×	
West Allis							×	×	×					×	×	×			×	×	×	

SCHOOLS CLASSIFIED.

In general there may be said to be developing in the several States definite types of schools which hitherto have not been recognized in this country in the previous growth of education. For ordinary purposes these schools may be classified into three distinct types:

1. **Day Vocational Schools,** in which the pupils attend school the greater part of the working day for at least five days each week. In these schools are taught both the actual operations and the theory underlying these operations. These schools may again be classified according to (*a*) the place where instruction is given, and (*b*) the type of responsibility. If all of the work is carried on under one roof, the school may be a unified, full-responsibility, or part-responsibility school. The specific designation will depend upon the amount of responsibility assumed or conceded to the school officials. These schools again may be dual schools, that is to say, part of the work may be done in the school building and a part carried on in the shop, with a possible change in responsibility.

2. **Evening Vocational Schools,** in which, as the name implies, the instruction in the school is given in the evening. It may be given in the same operation or in some operation connected with the occupation in which the pupil is employed in the daytime, but in which he wishes further instruction to increase his efficiency. On the other hand, it may be in some occupation which the student wishes to enter, which differs materially from his regular daily work.

As indicated in the previously given analysis, schools for the first type of students are trade extension schools and for the latter, trade preparatory schools.

3. **Continuation Schools,** which, as generally carried on in this country, are schools in which the pupil receives some form of day school instruction at the same time that he is employed in the shop. Like the evening schools, the work in these schools may be preparatory or extension. In addition, it is possible in these schools to offer work for general improvement or culture.

The school at Beverly, Mass., furnishes one of the best examples of the day vocational, full-responsibility school. In this school the pupils receive theoretic or related instruction under the direction of their foreman during one week; and during the following week, under the direction of the same foreman, they receive definite instruction in the shops of the United Shoe Machinery Co. The instructor or foreman employed by the city is at all times responsible directly to the school authorities and has entire charge of the work of the group of pupils with whom he is associated.

The school at Quincy, Mass., carried on in connection with the Fore River Ship Building Co., is illustrative of the dual-responsibility type of school, for the related instruction is given under the direction of the school authorities, while the technical or mechanical instruction is given under the management of the Fore River Ship Building Co.

Extension schools exist in many parts of the country, more particularly in the large cities. The evening schools in Boston devoted to homemaking and the metal trades and to the training of vocational teachers are excellent examples of these schools. While in some of these schools in some parts of the country is offered more work of a preparatory nature, in the sense used previously, it is yet to be demonstrated that any evening school can prepare students effectively for work in an unfamiliar occupation.

Probably the most notable example of the continuation school in a broad sense in this country is the system now carried on in Wisconsin. This type of school, however, has been in operation in Cincinnati for several years. More recently has it been inaugurated in Boston, where the director has charge of the vocational work in the city in general. Thus far the work here seems to be of an unusually high order. In all schools of this type there is an attempt to continue the education of the youth considerably beyond the age of 14 years. Some of these schools attempt to give trade extension and others trade preparatory work, but in general it may be said that continuation schools usually better illustrate improvement and general education schools than vocational schools. As in the case of the evening school, it does not seem to be clearly established that trades and occupations can be taught with a few hours' attendance upon school each week.

The best illustration of the part-time school is the one at Cincinnati in the university under Dr. Schneider. In this school the boys work one-half time in a manufacturing plant and attend school one-half time. This school, however, is of college grade, higher than secondary. The school at Fitchburg, Mass., is an example of the secondary school of this same type. Various experiments have been carried on in part-time education in other towns and cities, with varying degrees of success.

In any attempt to describe or classify vocational schools briefly, it is recognized that opinions as to the classification may differ. The attempt in the previous analysis has been only to set up a few of the larger types which represent rather definite procedure in the conduct of the schools. The classification here made is, so far as was possible, a direct analysis from the information available. It is to be expected that the work and method of organization in any of the schools mentioned may undergo continuous change. Hence, schools which have formerly been considered general schools may gradually grow into some definite type of vocational school.

Chapter III.

DEFINITIONS, ANALYSIS, AND ILLUSTRATIVE EXAMPLES.

PRELIMINARY.

Education is still largely in the "prescientific" stages of its development. As a consequence, it derives its terms and symbols almost exclusively from the everyday vernacular of the people. But the terminology thus developed necessarily lacks in definiteness and consistency. No two speakers on a given subject will be found to use terms derived from the popular language in exactly the same sense. Great confusion and waste of effort thus result.

The time has not yet arrived for educators to do what has been done in the fields of medicine, engineering, scientific agriculture, and other fields of applied science—that is, develop a technical terminology consisting of new terms and symbols coined for the purpose, and giving exact and unvarying meanings. In education it will be necessary for some time to continue to use, in the main, the old familiar words and phrases, with their numerous variations of meaning and their almost unlimited special connotations.

But educators can do this: They can agree to use certain words and phrases for the time being in certain definite ways, and with certain consistent meanings, and when making departures from this usage clearly indicate the grounds and extent of their divergence from the meaning agreed upon.

To this end there is required a series of definitions of the terms most frequently employed in education, and furthermore, such an extended analysis, with abundance of concrete illustration, as will show to anyone acquainted with educational thought actually what is meant by the nomenclature thus established. Most persons find it difficult to translate abstract terms and phrases into concrete and definite meanings. It is obvious also that during any period of marked activity in the development of an educational movement, new and varied situations arise which interest laymen as well as schoolmen. The very rapidity of that growth often anticipates the development of a clearly defined theory of education or social economy. To assist somewhat in avoiding the confusion in thinking and language resulting from the above conditions, this chapter has been prepared. The usual plan has been to follow and precede definitions with an extended analysis of the ideas involved, and to append numerous concrete illustrations of the types of vocational education referred to.

As noted in a preceding chapter the earlier developments of this type of education began in Massachusetts. Consequently, there has grown up in that State a considerable background of theory, practice, and experience which has necessitated the use of terms with rather clearly defined meanings. For this reason some of the suggestions as to the use of terms and meanings are based upon the usage there, more particularly by the board of education, which was required by law to supervise various forms of vocational education. This made it necessary to evolve, and use consistently, a somewhat definite terminology. Other terms and definitions have, however, been utilized in this terminology. The whole is to be regarded as an effort to overcome somewhat the tendency in one field of education to follow a loose, general, and sometimes almost meaningless terminology.

I. GENERAL DEFINITIONS AND DISTINCTIONS.

1 (Definition). **Vocational education** is any form of education, whether given in a school or elsewhere, the purpose of which is to fit an individual to pursue effectively a recognized profitable employment, whether pursued for wages or otherwise.

Webster's Dictionary defines vocation as follows: Destined or appropriate employment, calling, occupation, trade, business, profession.

Among the specific occupations for which vocational education may be given are the following: Physician, electrical engineer, teacher, bookkeeper, salesman, stenographer, machinist, plumber, bricklayer, printer, dressmaker, cook, weaver, gardener, florist, farmer, poultryman, homemaker, mother's assistant, domestic servant, sailor, fisherman. This list is capable of being added to indefinitely. There are, at least, some hundreds of different occupations for each of which specific vocational training is practicable.

(*a*) By "purpose" is here meant the purpose or aim which is held in view, and in conformity with which all steps are taken in arranging programs of instruction, selecting practical work, devising tests, etc. The aim is said to "control" the selection of the means and methods of instruction used in realizing the aim.

For example, if it is the purpose of given courses of training respectively to produce a machinist, a physician, and a printer, the requirements of these respective occupations will control in the choice of the materials and methods of instruction. In the vocational course, as such, matter will not be included which does not have a clearly perceived relationship to efficiency in the vocation.

(*b*) The purposes which should control in a given program of vocational education obviously can only be found by studying the vocation itself for which training is to be given. On the basis of the results of this study, means and methods of training and instruction must be devised, and a predetermined degree of efficiency in the proposed calling constitutes the aim or objective, in the light of the demand of which the means and methods of such training and instruction are selected.

Note

For example, the means and methods employed in the training of a printer may differ absolutely from those employed in the training of a house carpenter. What means (including thereunder subjects of study, courses of instruction, textbooks, material equipment, etc.) and methods (methods of teaching, class organization, adjustment of practical to technical work, etc.) shall be employed in each case will depend wholly upon the requirements of the occupation itself.

(*c*) The extent to which training can be given for a recognized vocation will, in the last analysis, also depend upon the inherited and acquired powers of the individual who is to be trained, and on the economic conditions determining the age at which the person enters upon the pursuit of a given occupation.

In common practice, only persons of exceptional native endowment and opportunities for prolonged study are admitted to classes preparing for the practice of medicine, engineering, teaching, etc. In every trade school, many applicants are refused, or are early eliminated, because of physical or other unfitness for the successful pursuit of the trade. A person obliged to become self-supporting at 14 or 15 years of age can not reasonably be expected to profit from the introductory stages of prolonged courses of instruction designed to require the time of a more favored student up to the age of 18 or 20.

(*d*) In practice, any program of vocational education should be based upon the requirements of a definitely analyzed calling, and the means and methods should be modified, so far as practicable, with a view to their adjustment to the needs and possibilities of a group of individuals having a common purpose, and possessed of somewhat similar qualifications.

(*e*) Vocational education of any specific kind "functions" when, as a result of a definite amount of training, an ascertainable degree of proficiency in the exercise of a vocation is shown in the individuals trained.

For example, if it can be shown that a given course of instruction (embracing practical training and theoretical instruction) in dentistry produces in most of those taking such course a definite ability successfully to practice dentistry, then such training is said to "function" effectively. Again, if in the case of a young man, already a successful worker in the machineshop calling, a definite series of short units of training in some form of mathematics or drawing adds obviously to his industrial ability, then such training is said to "function." If, on the other hand, 40 per cent or 50 per cent of the persons completing, for example, a course of study alleged to fit for farming are able to show no marked improvement in practice as a result of such training, or if an equal number, after having had such training, enter other callings, then the "functioning" of such instruction may be regarded as doubtful or imperfect.

2. **Major divisions of education of equal rank with vocational education.**—Other major divisions of education besides vocational education are: Physical education, social education, and cultural education. Physical education may be held to embrace all forms of training and instruction the controlling purposes of which are to conserve and promote useful development of the body and its capacity for effective "functioning." Social education may include all forms of training and instruction designed to make for better group living and activities. Included under this head are moral education, civic education, ethical training, and much of religious instruction. Cultural education may here include all forms of training and instruction designed to develop valuable cultural interests of an intellectual and æsthetic nature, including permanent interests in such fields as art, literature, science, and history. Cultural education also includes training in the use of intellectual "tools," or "instrumentalities" of general (not particular, i. e., vocational) application, such as the efficient use of the vernacular language in reading, writing, and speaking, a second language, etc. Social education and cultural education are often described jointly as "general" and in later stages as "liberal" education.

3. **Distinction between general and vocational education.**—General education aims to develop general intelligence, powers of appreciation in all common fields of utilization, and powers of execution with such intellectual instruments as language, mathematics, scientific method, etc., without reference to recognized or specific callings; while vocational education has its aims, and, therefore, its means and methods determined in any case by the requirements of a specific calling.

For example, experience proves that it is desirable for all persons to be trained to read and to write, without reference to the specific callings which they may ultimately pursue. Equally, all people should be trained to appreciate and to choose wisely for their own use valuable products from such fields of human effort as literature, art, economic goods, and the specialized service of others. All persons should also be trained in the habitual actions, appreciations, knowledge, insight, and ideals, which constitute approved moral conduct and good citizenship. The forms of education designed to produce these ends may be further subdivided and described by such terms as "elementary education," "academic education," "general secondary education," etc.

4. **Distinction between vocational and practical arts education.**—Vocational education is also to be distinguished from various forms of so-called "practical education," which may resemble, in their processes, vocational education, but which do not result in definite forms of vocational efficiency.

The various forms of nonvocational education here comprised under the term "practical arts," include manual training, sloyd, manual arts, arts and crafts when pursued as part of general education, household arts, simple gardening and agricultural education, many phases of commercial education, etc.

(*a*) The various forms of practical arts education as now given in schools are not properly vocational, although sometimes mistaken for vocational education, because they do not result, except by chance, in recognized forms of vocational efficiency, nor are they assumed to be given to persons who have defined vocational aims. The means and methods they adopt are not selected with a view to the preparation of the pupil for recognized callings.

(*b*) Various forms of practical arts education have an important and valuable place in general or liberal education, as a means of enlarging general intelligence, developing sound appreciation of economic products, and in part in laying the foundations for vocational choice.

(*c*) Practical arts education is sometimes termed "prevocational education," because of the belief that a suitable program of practical arts training will make important contributions toward the individual's ability to choose a vocation wisely. Its value to this end depends largely upon the degree to which the individual has already developed vocational interest and a desire to choose a suitable vocation.

5. **Distinction between direct (or systematic) vocational education and indirect vocational education.**—A large amount of vocational education, in the broad sense of that term, especially for the unskilled or semiskilled occupations, is an indirect result or a by-product of association and cooperation with older people engaged in productive occupations. One is said to "pick up" skill, vocational intelligence, or vocational ideals in this way. Among primitive peoples usually, and even in civilized society in many fields, such as homemaking and farming, indirect

vocational education is common. There is a tendency in society to substitute systematic or direct vocational education for indirect (and therefore, presumably, uneconomic and ineffective) procedures.

6. **Distinction between systematic vocational education through schools and through other agencies.**—Vocational education may be carried on through a school (an agency specialized for this purpose) or through other agencies, primarily specialized for other and, usually, profit-making purposes, and only secondarily adapted to systematic vocational education. Apprenticeship in the trades, and, originally, in the professions, is an example of such nonschool systematic vocational education. Farmers and homemakers sometimes quite systematically train their children to follow their own vocations. Commercial establishments often provide for the definite instruction and advancement of young assistants. There is a manifest tendency on the part of society to transfer to school agencies vocational education, because of the greater degree of concentration and effectiveness thus made possible, and because, under modern conditions, economic agencies are unable to give due attention to systematic vocational education as a secondary phase of their responsibilities.

7. **Distinction between private and public vocational schools.**—Vocational schools may be supported by private agencies either through endowments or through fees received from students. Such schools, when controlled by private agencies, are called "private vocational schools." They may further be distinguished according as they are (*a*) endowed with more or less philanthropic intent, and having no object of profit in view; or (*b*) as being on a commercial basis in having profit making as a chief end. Public vocational schools are those supported, at least in part, under public expense, and are usually under the control of publicly constituted authorities. Professional schools in State universities, trade and commercial schools conducted by municipalities, agricultural and homemaking schools conducted by States or subdivisions thereof, etc., are examples of public vocational schools.

As a rule, professional schools in the United States have not been organized for profit. Many commercial, and some trade schools, are conducted for profit. Philanthropy has also endowed many trade schools for dependent or defective children.

II. MAJOR DIVISIONS OF VOCATIONAL EDUCATION.

1. **Major divisions of occupations.**—The economic or productive occupations (as distinguished from leisure and cultural occupations) which men and women follow (chiefly for self-support) may, for convenience, be grouped in six large classes, namely, the

professions, the agricultural pursuits, the commercial pursuits, trades and industries, homemaking pursuits, and nautical pursuits.

The major divisions of wage-earning occupations recognized by the United States census are: The professions, agriculture, domestic occupations, trade and transportation, and trades and manufacturing pursuits. The United States census does not recognize the division of nautical pursuits, nor does it include homemaking pursuits (because nonwage-earning) under the head of domestic occupations.

The United States census includes under trade and transportation (for commercial pursuits) railway workers, sailors, etc. Under the domestic occupations are included barbers, janitors, soldiers, watchmen, cooks, servants, hotel keepers, etc.

2. **Major divisions of vocational education.**—The suitable major divisions of vocational education, corresponding, in the main, to those of the economic occupations, are these: Professional education, vocational commercial education, vocational agricultural education, vocational industrial education, vocational homemaking education, and nautical education.

It is advantageous to subdivide vocational education into the six divisions given above, because each division has its own distinctive pedagogical characteristics, based largely upon the phases of the occupation for which training is being given. It is clear, however, that in many cases a hard and fast classification will not be practicable. For example, cooking as a wage-earning occupation will be classed under the industries, whereas cooking as a part of home making will come properly under home-making education.

For other purposes, vocations may be grouped into (*a*) those requiring a relatively large amount of technical or abstract knowledge, such as the practice of medicine, law, teaching, engineering, and bookkeeping; and (*b*) those requiring or appearing to require a relatively large proportion of manual or other form of bodily skill, such as dentistry, machine-shop practice, dressmaking, and farming. In popular language, the distinction is made between "brain workers" and "hand workers." Also, it is important to make distinctions based on the suitable age at which workers can take up vocations (the so-called "age of efficient entrance into industry"). A person is rarely expected to take up responsible work in the practice of medicine before the age of 22 or 23; in engineering before the age of 20; and in teaching at least before the age of 18. Many trades can not be followed effectively until the worker has reached the age of 18, on account of the bodily strength required, or responsibility with machinery. Again, industrial vocations are frequently divided into the skilled and unskilled, to many of the former the word "trade" being applied.

(*a*) Because many forms of apparently practical education (i. e., training for productive pursuits), which are not in reality vocational (as defined above), are already designated by such terms as "commercial," "agricultural," "industrial," etc., it seems necessary that the term "vocational" should be included in each designation of a form of vocational education except the professional and nautical, as "vocational commercial education," "vocational agricultural education," etc.

(*b*) There is a sense in which the term "industrial" is also applied to many occupations lying outside of the trades and manufacturing pursuits, as when we speak of "industrial history," "industrial disturbances," "industrial and political development," etc. This usage has also been extended to the field of education, so that there is a popular sense in which "industrial education" means nearly every form of vocational education, except, perhaps, home-making and professional education. This loose and indefinite usage should be discouraged.

3 (Definition). **Professional education** includes those forms of vocational education the direct purpose of each of which is to prepare individuals for the successful pursuit of a recognized profession.

Among the professions recognized by the United States census are: Law, medicine, engineering, journalism, theology, architecture, acting, dentistry, teaching, music, literature.

Nursing, leadership in agriculture, leadership in war, and leadership in institutional management should probably also be included among the professions.

(*a*) Vocational education for the professions, like vocational education for the trades, was formerly carried on through apprenticeship, but now schools of medicine, law, theology, and military leadership have entirely replaced apprenticeship as a means of systematic vocational education for these professions. Schools for these professions originated in some cases several centuries ago. Vocational schools of engineering and teaching were first founded early in the nineteenth century. Almost every profession (except nursing, acting, and, in a measure, journalism) now has numerous well-organized schools of vocational training. Conscious apprenticeship methods seem to survive only in training for nursing and, in a measure, acting and journalism.

(*b*) In some professions, such as medicine, law, and teaching, the State safeguards standards by means of certification or licensing. In these cases the requirements of such certification greatly affect standards of vocational school work. The practice of State certification is carried much further in European countries than in America.

(*c*) Certain studies found in schools or colleges, preliminary to the professional course, are now recognized as preparatory or "prevocational" to professional study. Examples of these are biology as prevocational to medicine; history and economics as prevocational to law; trigonometry and physics as prevocational to engineering; etc. It was formerly asserted that studies such as Latin and modern languages were prevocational to almost all of the professions. The validity of this contention is now disputed.

4 (Definition). **Vocational commercial education** includes those forms of vocational education the direct purpose of each of which is to fit for some recognized commercial calling.

Among the commercial callings enumerated by the United States census are those of agent, banker and broker, bookkeeper and accountant, clerk and copyist, commercial traveler, merchant and dealer (retail), merchant and dealer (wholesale), messenger and office boy, officials of banks and companies, packers and shippers, salesmen and saleswomen, stenographers and typewriters, telegraph and telephone operators, etc.

Most of the training for commercial pursuits is still obtained in and through the callings themselves. Schools for systematic vocational commercial training exist for only a few occupations, such as those of bookkeeping and accountancy, and stenography and typewriting. A few schools have also been founded to train salesmen and saleswomen, clerks, telegraph and telephone operators, etc.

(*a*) It is desirable that steps be taken to analyze and define the essential features of the various commercial occupations for purposes of adapting to each its appropriate vocational training. For examples, that there are two distinct forms of salesmanship, namely, counter or indoor salesmanship and field or traveling salesmanship. These require different school training.

(*b*) The term "commercial education" has also long been employed to designate courses of study dealing with specific phases of practice or knowledge applicable in, or derived from, the commercial callings. Such education has frequently been fostered as vocational education, although its actual outcome in vocational efficiency—that is, its positive vocational "functioning"—has not been demonstrated and is still in doubt. This has, perhaps, been particularly the case when these alleged vocational studies have been carried on in public high schools. The approach to them has usually been bookish and theoretical, and comparatively slight effort has been made to base either practice or intellectual study on the actual requirements of commercial callings.

The studies commonly employed in this capacity are accountancy, bookkeeping, commercial law, industrial history, history of commerce, business arithmetic, typewriting, stenography, business practice, etc.

(*c*) Much so-called "commercial education" in public and private schools doubtless has, or can be made to have, value as a part of liberal or general education designed to give young people some appreciation of, and insight into, the commercial occupations. Training and instruction of this character might also do much in directing young people toward efficient choice of commercial occupations and in giving vocational ideals.

(*d*) Unfortunately, no clearly defined line is yet drawn, especially in public schools, between commercial studies that are expected to "function" vocationally and those which are designed as part of a general or liberal education. This is a source of much misdirected effort, and probably many young people are permanently handicapped by the failure of schools to distinguish between these two objects.

5 (Definition). **Commercial education,** or preferably **"commercial arts education,"** includes those studies derived from, or based upon, the commercial pursuits which are designed to give liberal or general education and to contribute to vocational guidance and vocational ideals in the field of the commercial occupations.

The term "commercial arts education" may seem somewhat forced in this connection, but there are good analogies in the departments of industrial arts education, agricultural arts education, and household arts education (which see).

6 (Definition). **Vocational agricultural education** includes those forms of vocational education the direct purpose of each of which is to prepare students for some one of the agricultural occupations.

Among agricultural occupations are those of agricultural laborer, dairyman, farmer or planter, gardener, florist or nurseryman, stock raiser, bee keeper, poultry keeper, etc.

Agricultural education of various kinds is now given in agricultural colleges. This includes much work of an essentially secondary grade (in extension classes, etc.), while a part of it is of a collegiate or professional level. A small number of agricultural secondary schools are also equipped to give actual vocational education toward agricultural pursuits.

Agricultural occupations being as yet less specialized than either professional or industrial occupations, agricultural education preserves a relatively general character. Much so-called "agricultural education" is still only quasi-vocational, because it does not give definite and actual preparation for agricultural vocations. But short lecture courses and demonstrations are valuable when offered to experienced farmers, capable of carrying the knowledge thus acquired into practice, making it "function."

(*a*) The term "agricultural education" is also applied to various forms of agricultural study, frequently having as an alleged end vocational education in agriculture. As found in most schools, the studies embraced under agricultural education are usually bookish and theoretical. Their actual "functioning" in efficiency to pursue such callings as those of the farmer, gardener, florist, poultryman, stock raiser, etc., is often doubtful, but their contributions to general or liberal education may be important.

(*b*) Agricultural education, so called, as now carried on in many schools is, or can be made, a valuable factor in liberal or general education. Appropriate studies under this head can give appreciation of, and insight into, agricultural occupations and the importance of agriculture both as an economic pursuit and as a means of social development. Furthermore, the study of agriculture to this end may give important vocational guidance and lead to the establishment of vocational ideals. It can also be made a valuable means of illustrating applications of various forms of science. It can, therefore, be regarded as an important form of liberal education.

(*c*) In many cases school authorities seem as yet to make no clear-cut distinction between vocational agricultural education and agricultural instruction, which is actually nonvocational in its results, but may be made of importance in liberal education. As a consequence, effort in this direction is doubtless frequently misdirected.

7 (Definition). **Agricultural arts education** includes those forms of training and study based upon agricultural pursuits and designed to enhance general intelligence, to promote appreciation of agriculture as a form of economic activity, to show wherein various sciences have practical application to human affairs, and to give vocational guidance and to inspire vocational ideals as these relate to the field of agriculture. Agricultural arts education, therefore, constitutes an important division of liberal education, both in the elementary and the secondary field.

8 (Definition). **Vocational industrial education** includes those forms of vocational education the direct purpose of each of which is to fit the individual for some industrial pursuit or trade.

Among the trades and industrial pursuits enumerated by the United States census are those of the carpenter and joiner, mason (brick and stone), painter and varnisher, paper hanger, plasterer, plumber and steam-fitter, roofer and slater, oil-well worker, chemical worker, brick and tile maker, glassworker, marble and stone cutter, potter, fisherman, miner, baker, butcher, confectioner, miller, food packer, blacksmith, iron and steel worker, machinist, boiler maker, stove maker, toolmaker, wheelwright, wire worker, shoemaker, harness maker, tanner, bottler, brewer, distiller, cabinetmaker, woodworker in general, brass worker, watchmaker, silver and gold worker, tinplate worker, bookbinder, box maker, engraver, paper-mill operative, printer, lithographer, dyer, cotton-mill operative, knitting-mill operative, silk-mill operative, woolen-mill operative, dressmaker, hat maker, milliner, seamstress, shirt maker, tailor, broom and brush maker, charcoal burner, steam engineer, fireman, photographer, tobacco operative, upholsterer.

(*a*) For many of the foregoing vocations no systematic vocational education at present exists, either in schools or under nonschool agencies.

Among the industrial occupations for which neither organized apprenticeship nor vocational schools as yet offer training are mill operatives (in general), food packers, box makers, general woodworkers, shoemakers (in factories), general iron and steel workers, etc.

(*b*) For a number of the foregoing occupations wherein skill is required, the chief form of training available at the present time is apprenticeship, of a more or less organized character.

The large majority of persons following such pursuits as those of carpenter, plasterer, plumber, stonecutter, machinist, etc., are still trained through the agency of apprenticeship.

(*c*) For some of the foregoing occupations, well-organized vocational schools (generally called trade schools), supported either privately or publicly, are available in various parts of the country, although the total number of workers trained by them constitutes, as yet, but a small proportion of those required by the industry.

Among the occupations for which definitely organized vocational schools, giving either complete training or partial training adjusted to the practice obtained in the industry, are these: Carpenter, house painter, plumber, machinist, bricklayer, cabinetmaker, patternmaker, sheet metal worker, bookbinder, sign painter, electrical worker, printer, dressmaker, milliner, etc.

In foreign countries well-organized day or part-time vocational schools are found also for such occupations as those of baker, butcher, weaver, cook, teamster, lithographer.

Some industries have organized special schools for such occupations as those of motorman, glove maker, photographer, linotype operator, telephone operator, confectioner, etc.

(*d*) The term "industrial education" is frequently applied to a variety of forms of practical, or apparently technical training, based upon operations characteristic of some industries.

Among the forms of so-called practical training to which the term industrial education is sometimes applied are manual training, sloyd, mechanical drawing, technical training, mechanics arts training, printing, bookbinding, metal work, etc.

(*e*) Like commercial arts education, and agricultural arts education described above, the really valuable pursuit in "this industrial education" (which may properly be called "industrial arts" education) should be realized through the participation of the pupil in the practical phases of selected processes, as these may be found adapted to the pupil's experience, physical powers, etc. Practical participation in industrial arts processes can be supplemented by reading, visits to industrial establishments, experience in analyzing and assembling machines, etc., all of which may have as a controlling purpose the increasing of the pupil's general intelligence, the stimulation of his powers of wise utilization, the laying of foundations for vocational choice, and the interpreting of contemporary life. All these constitute valuable contributions to general education.

9 (Definition). **Industrial arts education** includes those forms of training and study based upon industrial pursuits and designed to enhance general intelligence and give vocational guidance in the field of industrial occupations.

(*a*) Reform schools for juvenile delinquents have been in the past, and are sometimes still, called "industrial schools." When these institutions ceased to be looked upon merely as prisons, or houses of refuge, public sentiment demanded that vocational training should be given in them, in view of the probable fact that neither the opportunities of apprenticeship nor of home vocational training would be available for these unfortunate youth. Hence, even 50 years ago a form of systematic vocational training was undertaken in reform schools. Probably only a small part of this training ever actually "functioned" in vocational power, because of wrong pedagogical methods employed.

10 (Definition). **Vocational homemaking education** includes those forms of vocational education the direct object of which is to fit for homemaking as practiced by the wife and mother in the home and also for some specialized forms as practiced by household employees, housekeepers, or other wage-earning assistants to the homemaker.

A large variety of more or less unspecialized activities are carried on in the home. These include the preparation of meals, laundering, house cleaning, garment making, garment repairing, the nursing of children, minor repair work in the equipment of the home, etc. In homes conducted on a somewhat elaborate scale, specialized forms of service may be found, the workers being housekeepers, cooks, waitresses, chambermaids, nurses, butlers, janitors, etc.

Among occupations which were formerly carried on in the home, but have been since specialized away from it, are those of spinning, weaving, milking, butter and cheese making, tanning, barbering, brewing, food packing, shoemaking, furniture making, etc. Other occupations which now seem to be in process of being specialized away from the home are baking, garment making, fruit preserving, etc.

(*a*) As in the case of farming, there is comparatively little specific vocational differentiation within the average home. Notwithstanding the removal from the home of many specific forms of productive work, homemaking remains a distinctive and clearly defined vocation for the wife and mother living under normal family relations as well as for specialist workers in homes and institutions. It is ordinarily a composite vocation, utilizing various forms of skill and related knowledge. Vocational education for homemaking must, therefore, aim to produce as many forms of power as the distinctive home operations now require, each to a degree suited to the time, energy, and native ability of the learner. It is especially necessary that in the homemaker an harmonious union of various forms of skill and knowledge should be found.

(*b*) From 60 per cent to 80 per cent of all women eventually become homemakers. Modern social and economic conditions are such that the majority of these spend the years from substantially 16 to 20 or 25 in wage-earning pursuits (only a small proportion being connected with homes), after which homemaking is entered as a career to be followed for life, or at least for many years.

(*c*) During recent years, many forms of education have been introduced into private and public schools as designed to minister to the development of homemaking power or appreciation. These are variously named " household arts," " domestic science," " domestic arts," " household economics," " home economics," " domestic economy," etc. Frequently they have been introduced into schools as subjects of study and laboratory experiment on the same basis as other studies. The extent to which these studies " function " vocationally, if at all, for homemaking is yet in doubt, especially when they are followed only from two to five hours per week. In most instances it is probable that the training thus given should be rewarded as effective rather on the side of liberal than of vocational education.

(*d*) The study of household arts (with the aid of suitable textbooks, laboratory experimental work, etc.) can obviously be made a valuable feature of liberal education, in the sense that such study can improve standards of utilization and develop larger ideals of home life. Women exert an exceptionally large influence on standards of consumption in the fields of artistic products, economic utilities, and specialized service. For this reason, it is especially important that as a phase of their general education they should be instructed and trained as to most effective standards of utilization.

11 (Definition). **Household arts education** includes all those forms of instruction and training based upon the occupations of the home or household, and which are designed to promote higher standards of appreciation and utilization in the field of the activities associated with homemaking, to promote right conceptions of the social importance of the home as a nursery of childhood and a haven for the wage earners of the family, and to show wherein the various arts and sciences have practical application in domestic life. Hence, household arts education can be made a large factor in the liberal education of womanhood.

12 (Definition). **Nautical education** is the term used to designate those forms of vocational education, the controlling purpose of each of which is to train youths for such occupations as those of the fisherman, the sailor, the ship captain, and the like. These forms of training have not yet been clearly differentiated in the educational practice of America. A few special nautical schools of a technical character exist, and in the United States naval service facilities for training seamen are provided.

III. PEDAGOGICAL PHASES OF VOCATIONAL EDUCATION.

1. **Major and minor phases.**—Vocational education, as respects its organization for teaching purposes, presents in almost every instance two quite distinct major phases and one minor phase; namely, the concrete, practical, or manipulative major phase; the technical or theoretical major phase, the subjects of study under the latter head being sometimes referred to as the " related subjects "; and a third relatively minor phase embracing those studies and practices designed to promote vocational ideals, general insight, and other knowledge and appreciation which are pertinent, but not directly necessary for the particular vocation for which training is being given.

In the training of the dentist there is required: (*a*) Practical work in filling, etc.; (*b*) theoretical study of anatomy, etc.; and (*c*) possibly some study of the history of dentistry, of the practice of dentistry in other countries, of the need on the part of the dentist of offsetting the strains of his calling by suitable exercises for the sake of his own health, etc. In the training of the teacher there are required: (*a*) Practice in teaching; (*b*) the study, from the standpoint of the teacher, of the subjects which she will expect to teach, as well as methods of teaching, school hygiene, etc.; and (*c*) the history of educational administration, the lives of noted educators, etc. In the training of the machinist is required: (*a*) A large amount of practical manipulative work in constructing valuable objects from steel or iron; (*b*) study of such phases of mathematics, drawing, mechanics, etc., as apply to the practice of the machinist; and (*c*) possibly some study of the history of the evolution of the iron and steel industries, of the distribution of these industries in various countries, of special hygiene for metal workers, etc.

(*a*) The foregoing are the phases of a program of systematic vocational education. It is recognized, of course, that a program of liberal or general education may be carried on side by side with a program of vocational education. A student might give half his day to vocational education and the other half to liberal education; or he might give one week to the one and another week to the other. A more common arrangement is to have the student give the best part of his working day to vocational education, with provision made for some cultural or civic studies, exercises, or participation, in marginal time. For example, the Massachusetts program permits from 10 per cent to 20 per cent of the day to be given to cultural training. This may be in English literature, music, or other lines of interest and importance.

(*b*) The problem of the proper combination of general with vocational education is one to be determined on the basis of aims and the requirements of efficient practice in each field, taking due account of the economic necessities of the learner. It is contended in some quarters that, if general or liberal education be blended with vocational, neither form becomes efficient. The question as to how far the two forms may be adjusted within a given day or other period efficiently must be determined by the experiment.

2 (Definition). **The concrete, practical, or manipulative phase** of vocational education in any occupational field includes all phases of learning through actual and direct participation in the practical processes characteristic of the vocation itself.

The following are examples: The prospective physician obtains concrete training through his hospital service, the teacher in his practice teaching, the engineer in actual field work, the journalist by serving as reporter, etc. Persons preparing for the commercial callings are expected to receive concrete or practical training through typewriting and stenography of a presumably practical nature made a part of the course of instruction through various types of exercises in salesmanship, the undertaking of practical work in accounting, etc. Manipulative or concrete work in agriculture as a means of training is provided through having the learners actually engage in the raising of crops, on a large or small scale, participation in harvesting, and other practical work during summers and vacations, the care of domestic animals as a part of the animal husbandry course, etc. In various forms of vocational industrial education, practical work is provided through having prospective machinists manufacture parts of the equipment of the school, through the manufacture of salable products, etc.; prospective dressmakers spend a part of their time in making a salable product, etc. Practical or manipulative work in homemaking involves the preparation of meals, the actual making and repair of garments, the care of children, etc.

Concrete, practical, or manipulative work in vocational education may be (*a*) on a nonproductive or (*b*) on a productive basis. Productive manipulative work may involve no compensation to the student worker or regular compensation to him. In general, modern pedagogical theory favors productive work as against nonproductive work, where practicable. The distinction is this: Nonproductive work is not commercially profitable; when the popil is through, his product is laid aside or destroyed. Productive work is commercially profitable. Its results are used to increase the equipment of the school itself, to render service in the schools of the local community, or to be sold. Again, students who do productive work which is used in the school or sold may not be compensated for the same on the ground that it is their partial contribution toward the cost of their education, or they may receive a small wage for the same. Pedagogical theory favors the latter plan, where practicable, because of the greater interest evoked and because the environment produced is similar to that in which the pupil will later follow his vocation.

3 (Definition). **Productive practical work** includes all forms of practical work as a part of vocational education, the material results of which are of evident value to society.

The services of internes in hospitals, of prospective teachers in training schools, of boys doing their productive work on a home farm, of shopworkers in city schools doing repair work on school buildings, of homemaking pupils taking charge of the preparation of meals for schools, etc., all represent forms of productive practical work.

4 (Definition). **Nonproductive practical work** includes all practical work as a part of vocational training the output of which can be put into no practical use.

Examples: Business college students keeping books, doing typewriting, etc., of a nonmarketable character; agricultural school students raising products which are not marketed or consumed; engineering students making extensive surveys the results of which are of no commercial value; shop students constructing articles that are simply kept for exhibit or destroyed, etc.

(*a*) Vocational education in the past was carried on largely in shops, and through other commercial vocational agencies, under a more or less organized system of apprenticeship. The pupil learned almost exclusively through actual participation in concrete work. His tasks were sometimes graduated as to difficulty, either by chance or design. The pupil learned mainly through imitation, his superior sometimes showing him the "tricks" and various devices. Vocational education under apprenticeship is usually more effective on its practical than on its technical side.

Many examples still survive of learning through apprenticeship. A locomotive engineer obtains his training first as a fireman. A nurse frequently obtains all of her training through actual nursing in a hospital. Until very recently, many teachers in England obtained their training solely as apprentices, being known as "pupil teachers." In many skilled trades, organized apprenticeship still survives, in one form or another. Leadership in many vocational fields is reached through promotion from the lower stages—essentially a method of learning through actual participation which is without the direction characteristic of apprenticeship.

(*b*) Because recognition of the value of actual participation in concrete work took place early in the development of vocational education in schools, endeavors have frequently been made to employ substitutes for participation in the actual processes themselves where participation in the commercial occupations is difficult or impracticable. This may be called practical work on an "exercise" basis.

The following are examples: The law student practices in a moot court. The engineering student carries on surveys around the campus. Commercial schools devise imitation money, set up receiving windows, etc., and carry on "make-believe" business having some semblance to actual business. The agricultural student is given small plats on which to raise plants, or he shares in a form of "group" or "gang" labor directed by some teacher. The wood-working student is given exercises on lathes and other machines, the products of such exercises having no commercial value.

(*c*) Several problems are still unsolved as regards concrete work in many lines of vocational training. Can commercially practical work be presented in properly graduated stages? What shall be the unit, or project, in the practical work? Can practical work in a school take the place at all of practical work under commercial conditions apart from the school? Is it economically desirable that the practical work of a school be sold in open market? Shall the pupil be compensated for his practical work? How shall the practical work be related to necessary technical training? How far shall the student be permitted to subdivide his practical work in the direction of becoming a specialist, as in machine-shop working, textile working, etc.?

5 (Definition). **Apprenticeship** is a term here used to include all forms of systematic vocational education through the participation of the learner, under the direction of skilled workers, in the actual work of various productive occupations.

Well-known examples are the apprenticeship arrangements in the various skilled trades. Other examples, not always included under the term, are the "pupil-teacher system," formerly prevalent in England, the training of nurses in hospital practice, the training of commercial experts in commercial houses through systematic advancement from one type of employment to another, the methods employed in the middle ages of training knights and priests, the methods formerly prevalent by which physicians, lawyers, etc., first took service as youths under older practitioners, etc.

Apprenticeship as a means of vocational education is generally believed by students to be declining in possibilities and importance. It has almost disappeared in all the professions except nursing, acting, and journalism. In the industries the substitution of manufacturing processes for crafts production, and the subdivision of work made possible, has greatly diminished the field for apprenticeship training. In occupations calling for increased amounts of technical knowledge (various electrical trades, plumbing, gardening, etc.) the methods of apprenticeship prove unequal to the task of giving, in satisfactory form, technical instruction. Evening vocational schools were first organized to compensate for this deficiency.

6 (Definition). **Technical, theoretical, or "related subject" phases of vocational education** include those readings, lectures, and studies and exercises in mathematics, science, drawing and art, laboratory exercises, etc., which furnish organized knowledge of, and practical insight into, the so-called "technical aspects" of vocations. The technical studies appropriate to any vocation can only be determined by a study of the requirements of that vocation itself.

The following are examples of the technical knowledge required in certain vocations: For the physician, physiology, special phases of chemistry, materia medica, etc.; for the electrical engineer, certain phases of applied mathematics, drawing, the principles of electricity, some of the principles of mechanics, etc.; for the farmer, agricultural science, embodying selected phases of botany, soil physics, chemistry of fertilizers, hygiene of domestic animals, meteorology, accounting, exchange forms of mechanics as applied in farm machines, etc.; for the bookkeeper, some phases of mathematics; for the house carpenter, certain phases of drawing, mechanics, building materials, and mathematical calculations; for a teamster, local geography, mechanics of vehicles, hygiene of domestic animals, etc.; for the dressmaker, certain phases of art, drawing, mechanics, etc.; for the homemaker, specific phases of food chemistry, decorative art, simple forms of mechanism, etc.

(*a*) With regard to the great majority of vocations, no satisfactory analysis has yet been made of the related technical studies which are pertinent and valuable. But it has become evident that the content of technical training which actually functions in many vocations is much less than has been assumed. The inherited traditions of academic education have caused many people to believe that all of the phases or parts under a given inclusive subject should be studied, notwithstanding the absurdities to which this contention leads. For example, botany and chemistry as separate abstract subjects are sometimes taught in agricultural schools; prospective mechanics are induced to study algebra and geometry; and a prospective house carpenter is urged to take a general course in mechanical drawing, although, in each case, the successful workers in these fields will employ only very limited and special phases of these subjects. It is obvious that progress in the development of programs of vocational education will involve a clear differentiation of the technical training needed in each vocation. Experience will probably show that so-called "foundations" in general knowledge of abstract scientific, or mathematical, or art subjects, is often relatively valueless for vocational purposes.

(*b*) In some discussions of vocational education the related technical studies are sometimes called the "academic subjects." This usage is confusing, and should be discouraged. The word "academic" should be restricted to the field of general, or liberal, education.

7 (Definition). **A technical school** is a school designed to give technical knowledge only, as that is involved in some recognized vocation or group of related vocations.

The following are examples: Schools of law and medicine originally taught only the more theoretical phases of these professions. Only in the more recent stages of their development are they introducing practical work as a means of instruction. Schools of engineering originally taught chiefly engineering mathematics, drawing, science, etc., giving little or no practical work. Some schools of technology still confine themselves to this; but in many others shop-work, summer-camp work, compulsory practical service in mines, etc., are now added, to give necessary practical experience. The earlier agricultural colleges and schools taught primarily the mathematics and sciences supposed to constitute a basis of knowledge for agricultural practice. Some commercial schools offer only informational studies regarding commercial operations. Technical high schools teach chiefly certain phases of applied science and art, illustrated with laboratory practice. Much of the home making taught in contemporary high and other schools, under such heads as "household arts," "domestic economy," "household economics," etc., is primarily an attempt to give technical knowledge only of the processes involved in home making.

(*a*) Technical education had its origin and took its shape primarily through the attempts of society to supplement apprenticeship as a means of vocational training, the apprenticeship giving practical experience, but not related technical knowledge. Evening vocational schools, as well as day schools, came into existence, first, to give related technical knowledge.

The first medical colleges, as well as other professional schools, in many instances assumed that the student had already served an apprenticeship as an assistant to a practitioner.

(*b*) The value of technical education when administered without connection with practical training must be considered solely with reference to its actual efficiency in contributing to a complete scheme of vocational education. In some of the higher fields, as engineering, technical knowledge alone may constitute a very valuable foundation, whereas, in many of the trades, it may, if unaccompanied by practical experience, be almost valueless. The entire matter is one requiring further scientific study.

(*c*) Secondary technical schools as now found in the industrial, agricultural, and commercial fields can only occasionally be called "vocational schools" in the sense used here, because the instruction in them is not adjusted to the requirements of a distinctive vocation. Commonly their teaching is of a general nature, unrelated to the actual requirements of callings as now organized. It is probable that their teaching does not generally "function" in direct vocational power. In a few cases the effects of the training given may be vocational, as in the case of draftsmen and analytical chemists.

(*d*) Technical schools sometimes offer studies the actual value of which may consist in the establishing ideals and appreciations. A normal school, for example, may offer the history of education, which is not properly a technical study, but the study of which may give rise to ideals of teaching. Such a study properly belongs under the head of "General vocational studies."

8 (Definition). **General vocational studies** are those which, when considered with reference to a particular calling, seem to lead to the development of ideals, general interest, and social insight, but without contributing to specific forms of useful knowledge, skill, or power.

The following are examples: The physician may study the history of medicine or the hospital practices of the past, or he may read the biographies of such men as Jenner, Pasteur, and Lister. The engineer may study economics and the rise of modern industry, labor problems, and geological science. The teacher may study general psychology and the history of education. The prospective machinist may study the general literature of his subject, the history of the evolution of steel working, industrial hygiene as related to his calling, etc. The prospective clerk may study commercial geography, the history of exchange, and modern banking problems. The prospective home maker may read of the homes of the past or of the present in other lands, etc.

(*a*) It is obvious that in and about any particular calling a large amount of literature may be gathered which, properly used, should do much to promote ideals, to give insight into the social relationships of the calling, to develop an appreciation of its hygienic and psychological aspects, and to lay the foundations for an appreciation of the possibilities of advancement for the worker.

(*b*) The actual value of so-called general vocational education is still open to question. It is exceedingly easy to organize and administer various forms of "general vocational" education in accordance with academic traditions. It may lead to "industrial intelligence," a quality which, if it exists as ordinarily conceived, is much in demand. It is probable that the actual value of general vocational education is very dependent upon the degree to which it has been preceded by foundations in practical experience and definitely related technical studies.

IV. PEDAGOGICAL DEVICES IN VOCATIONAL EDUCATION.

Vocational education requires the development of new and sometimes unfamiliar pedagogical devices, most important of which, for the present, are those signified by the terms "projects," "short unit course," "correlation of technical and practical training," and "productive work."

1 (Definition). **A project** in vocational education is a definite unit of instruction which combines practical or manipulative achievement with a definite enhancement of power to apply related technical knowledge.

(*a*) Practical work alone may correspond to what is known as a "job" in many lines of industry. A project is an "educational" job; it has educational value, and it ought to have economic value.

(*b*) Growth in capacity to apply related technical knowledge may involve application of general knowledge already obtained, as where a student in carpentry learns to make further use of his previously acquired knowledge of board measure; or it may involve the acquisition of new technical knowledge, as that is immediately related to the job in hand.

(*c*) A complete project usually involves the following steps on the part of the learner:

1. Purposeful consideration of the conditions to be met in undertaking the job.
2. Planning how to meet these conditions, in terms of the materials of the trade, trade operations, suitable tools, etc.

3. Preparation of needed preliminary working aids in conventional forms, such as drawings, working plans, etc.
4. The performing of such calculations as may be necessary, including figuring cost, ascertaining amount of stock to be used, and other conditions.
5. The execution of the job as planned, and in accordance with specifications.
6. The submission of a proper report of the job.
7. In some cases, a disposal of the project on an economic basis.

The following are examples of projects: An engineering student employed to lay out a grade as required by a railroad; a hospital interne given charge of a case; a teacher taking full charge of a group of pupils; an agricultural student undertaking to raise an acre of corn, and to market the same, or to take charge of two dairy cows for a year, including the proper care, feeding, and milking of these; an industrial-school student undertaking a definite job of work as this is carried on in commercial enterprises; a pupil in a trade school making a dress, or a group of pupils in a school of carpentry erecting a cottage; a student in homemaking preparing the family breakfast for a month, etc.

(*d*) Projects may be subdivided into major and minor projects, the latter being subdivisions of major projects.

For example, a boy in an agricultural school might undertake to raise an acre of potatoes, this being his major project. For practical purposes, he would subdivide this into a series of minor projects, each one a unit in itself. A class of pupils in an industrial school might undertake the construction of a machine, each boy having some one piece of work assigned to him as his minor project, or even some one operation. A girl undertaking the preparation of the family breakfasts for a month might make her minor project temporarily the study and practice required in preparation of one dish.

(*e*) It is obvious that projects may be individual or cooperative. It is conceivable that in industrial schools, large cooperative projects might be undertaken by a class, with appropriate subdivisions, each subdivision forming a project by itself.

(*f*) The project has no definite counterpart in academic or general education. Much of the work in general education was formerly organized on the "lesson unit" basis. In such subjects as mathematics, history, geography, English, it is now organized on the "topic unit" basis. The study of a classic selection in a foreign language, and the execution of a manual training enterprise provide the nearest analogies.

(*g*) The alternative to the project organization of vocational work is, on the one hand, the job as the unit of practical work, and, on the other, the logically organized course of instruction in technical subjects.

(*h*) In many lines of vocational education, satisfactory series of projects have not yet been developed. Obviously, the development of a project system of organizing vocational work presents very great difficulties, and especially to persons prepossessed in favor of the logical organization of technical subject matter.

2 (Definition). **The short unit course** is an intensive form of training and instruction which is intended to meet, in a limited number of lessons, a specific need of a particular group of learners. Each unit deals with some one teachable phase of a trade or other occupation, and is complete in itself.

The short unit course has thus far been worked out primarily only in the fields of agricultural, industrial, and homemaking education. In agriculture, short unit courses are found in connection with extension work, where, in the course of a week or a few weeks definite instruction is given in both the manipulative and technical phases of some one specific field of practice in agriculture or animal husbandry. In evening industrial schools the short unit course is designed to give quite specific instruction, either of a manipulative or technical character, in some one phase of the trade or occupation being followed, or to be followed. It is assumed that the short unit course, when technical in character, will be related to the practical work already being followed by the learner.

The following are examples: Five lessons in the use of spraying; 5 lessons in orchard cropping; 5 lessons in farm accounting; 5 lessons in grafting; 10 lessons in kiln drying of lumber; 10 lessons in the use of the buzz planer; 5 lessons in the use of the sliding rule; 6 lessons in thread cutting; 20 lessons in cotton sampling; 5 lessons in the making of a shirt waist.

3 (Definition). **The correlation of technical studies and practical work** includes such pedagogical devices as involve the integral relation of technical studies with jobs of practical work as found in the project method of organization.

The following are examples: Mechanical drawing may be taught as a general subject, apart from its particular application to the work of the machinist, house carpenter, or dressmaker (probably general, or general technical, rather than vocational); or, as opposed to this, it may be taught in intimate correlation with the practical work of training for various specific vocations. A pupil studying house carpentry may acquire power in mechanical drawing through exercises closely adjusted to the practical work which he is taking from day to day. Different forms of drawing would therefore be required for the machinist, the plumber, the electrician, etc.

Such sciences as botany and zoology may be studied by a prospective farmer, independent of their particular applications in agriculture (therefore general education). As opposed to this, the student of agriculture may undertake to raise an acre of potatoes, and in conjunction with this problem study those phases of plant and animal life which are essential to the success of his enterprise.

A girl may study the mechanical principles of movement of air currents as a matter of physics (general). As opposed to this, she may be instructed in the practical problems of making various types of stoves burn effectively, and in conjunction with this problem such matters relating to the circulation of air currents in stoves as will reinforce her practical experience.

In view of academic traditions, it is not difficult to teach various sciences, as well as mathematics and drawing, as separate abstract subjects. It is now generally believed that for most pupils, at least, the learning of these subjects in the abstract does not contribute to efficient vocational training. On the other hand, the integral correlation of phases of these technical studies with practical work presents obvious pedagogical difficulties, but its vocational value is unquestioned.

V. TYPES OF SCHOOLS FOR VOCATIONAL EDUCATION.

1. **Vocational schools classified.**—Vocational education in schools, like other forms of education, may be carried on in day schools (in which the student is under the control of the school for substantially all of his working time); evening schools (in which the student is regularly employed, and is under direction of the school only for his evening hours); or continuation schools (in which the student is regularly employed, and is under control of the school only for a limited number of hours taken from his working day).

These schools may be further classified as follows:

Day vocational schools:
  (*a*) Unified, or combined.
  (*b*) Dual, or cooperative—
    (1) Full responsibility.
    (2) Part responsibility.
Evening vocational schools:
  (*a*) Preparatory.
  (*b*) Extension.
Continuation vocational schools:
  (*a*) Preparatory.
  (*b*) Extension.

2 (Definition). **A day school for vocational education** is one which requires that the pupil be under the direction of the school for substantially the greater part of each working day, for at least five days in each week, for the major portion of each year.

Day vocational schools are of several types, according as the practical or productive work in them is done under the same roof and in direct relation to the technical instruction, or separately from it. Among these are the "unified" or "combined" type, and the "dual" or "cooperative" type.

3 (Definition). A day vocational school of the **unified** or **combined type** is one in which all phases of a complete program of vocational education are carried on under one roof, or general building, under the immediate control and direction of the school.

The following are examples of unified, or combined, day vocational schools: A medical college immediately controlling its own hospital, and opportunities for clinical and practical work; an engineering college possessing its own shops, summer camps, mines, etc., for experimental and practical work; an agricultural school owning its own farms, gardens, and live stock; a commercial school with differentiated opportunities for various forms of practical work in accounting, typewriting, salesmanship, etc.; an industrial school having its own productive shops and other facilities for constructive work; a home-making school owning a house or apartment in which practical housekeeping is carried on, including such branches as cooking, sewing, laundering, care of rooms, nursing, etc.

It is a present tendency in vocational education to insist that the practical work given in training shall be of a productive, commercially profitable, and marketable character. Hence, we have instances of medical colleges managing serviceable hospitals; normal schools using as practice schools public schools in the community; schools of carpentry leasing or buying land, erecting buildings, and selling the same; dressmaking schools marketing their product; electrical workers' schools doing necessary labor about school buildings; printing schools taking orders on a commercial scale; home-making schools supplying meals and other products for sale or use outside; etc.

A few instances exist where day vocational schools have complete control of practical work carried on within the confines of an industrial or other establishment at some little distance, but which is, nevertheless, completely under the control of the instructing force of the school.

4 (Definition). A day vocational school is of the **dual** or **cooperative type** when the complete program of vocational training involves the cooperation or other relationship of two agencies, one, more specifically the school, giving technical and related instruction, and the other an institution or agency having commercial or practical ends in view, but placed in a cooperative relationship as a means of furnishing opportunities for practical experience to properly prepare pupils.

The dual, or cooperative, day vocational school is of two distinct types, according as (*a*) the authorities in control of the school also control the adjustment and assignment of the practical and productive work as this may be used for educational purposes, or (*b*) the control of the practical work for learners is independent of the school authorities.

5 (Definition). A day vocational school of the dual or cooperative type is a **full-responsibility school** when it has the direction of the arrangement of practical work for learners when this is carried on in independent establishments.

The following are examples of day vocational schools of the cooperative type having full responsibility: A medical college sending its students into hospital practice in a hospital under other management, but with arrangements whereby the work done by the students shall be completely under the direction of the college authorities; a normal school sending its students into the public schools of a local community, the students remaining completely under the direction of the normal school authorities; a group of engineering students taking a job of practical work, to be carried out wholly under the direction of the college authorities; an industrial school sending a group of boys into an industrial establishment, where equipment and space are placed at their disposal for carrying out productive work, the actual program of such work being under the direction of the school authorities; an agricultural school, the pupils in which carry on, on their home farms, practical productive work under the complete direction of the school.

6 (Definition). A day vocational school of the dual or cooperative type is a **part-responsibility school** when the actual work of students sent into other establishments for purposes of practical training is controlled by, and largely under, the direction of the industrial establishment itself.

The following are examples of the dual or cooperative type having part responsibility: A normal school sending its students into public schools where these students are not under the control of the normal school, for the sake of practical experience; an engineering school arranging that its students shall have opportunities for practical work on railroads, in mines, and elsewhere, in the capacity of assistants or laborers; a commercial school sending its students into offices or mercantile establishments during busy seasons or at other times, for practical experience; an industrial school arranging the group of its students who shall, during alternate weeks, or at other regular intervals, work as apprentices, assistants, or laborers in industrial establishments; an agricultural school sending its pupils out on farms for practical experience, or in cooperation with parents or others in carrying out practical processes on the farm; a home-making school sending its pupils into their own homes to carry on the home processes, subject to the requirements of the home itself.

(*a*) The day vocational school of the cooperative "part responsibility" type must not be confused with the "part-time" school, which receives pupils from industrial establishments where they are already employed. (This type of school will later be defined as a modified form of continuation school.) At times the actual distinctions in character between the operations of the two schools may be difficult to define; but the essential difference is determined by the fact that in one type the pupils go from the school to the employing establishment with a view to obtaining practical experience, whereas in the other type the pupils go from the employing establishment to the schools for the purpose of obtaining supplemental training. The latter is properly "trade-extension training," discussed under continuation education.

(*b*) The efficiency of any form of dual or cooperative vocational education depends upon the degree to which the practical experience obtained in the shop and the technical instruction obtained in the school are coordinated, correlated, and integrated. In some existing so-called part-time plans the practical work of the pupil is only remotely related to the technical instruction. Such an arrangement results in poor vocational education. An agricultural student spending his summers on a farm will obtain valuable practical experience, but much of it, being unrelated to his school work, will not constitute a valuable part of vocational education. Technical instruction in homemaking, without practical experience under the direction of the school, is but poorly supplemented by the miscellaneous practical experience obtained at home. To send a commercial pupil into an office or mercantile establishment during a busy season is much better than no practical experience during the course of school training; but such practical experience will be related only remotely to the concrete teaching. Normal schools find the practice of sending students into schools not under their direct control of doubtful value, and in any case helpful only in the last stages of their vocational training.

(*c*) Theoretically, vocational training under cooperative or dual arrangements should ultimately prove the most effective, if proper coordination of the separate agencies can be procured, because then the required practical experience is obtained under genuinely commercial conditions, a situation most difficult to develop in a unified day vocational school. Satisfactory coordination of effort between school and commercial establishment for dual or cooperative vocational training is now difficult to obtain, partly (*a*) because commercial and industrial establishments conducted for profit are indisposed to advance learners through successive stages of practical work, and (*b*) because teachers of technical studies are indisposed or unable to adjust technical instruction to the requirements of practical experience, preferring to teach technical studies on some purely logical basis. In time the following two methods of meeting these difficulties may be developed:

(1) Vocational schools having groups of pupils in need of, and ready for, practical experience may offer the services of these to industrial establishments on suitable terms, on condition that these pupils, under the supervision of instructors, be allowed to fit into practical work at such places and to such degrees as will be educationally profitable, while at the same time involving no economic loss on the part of the employer. (This arrangement would be especially suited to pupils from 14 to 18 years of age.)

(2) Teachers of technical subjects will be required to adjust their instruction so that, as their students who are regularly employed in establishments are advanced from stage to stage of work, the technical teacher will adjust his training to the requirements of the practical work. This will usually require that subjects of study based upon purely logical foundations in technical subjects be replaced by short unit courses and exercises based upon the practical work of the student.

7 (Definition). **Evening vocational schools** are schools in which the hours of instruction lie outside of the customary working day. Evening vocational schools are of two types, extension and preparatory.

8 (Definition). **The extension evening vocational school** is a school in which a young person already employed in some occupation receives, during evening hours, vocational education in subjects closely correlated with the work which he follows during the day, and calculated to assist him toward greater efficiency or more advanced work in that calling.

The following are examples: A young man following the trade of machinist, receiving an evening-school training in mechanical drawing and calculations related to his work, or practical instruction on machines closely related to those he operates during the day, or calculated to give him more technical knowledge of them; a man already engaged in raising poultry, obtaining in night classes technical instruction in the more scientific phases of poultry raising; a man engaged during the day in the practice of medicine, law, or engineering, studying in an appropriate evening school subjects related to his professional work; a domestic employed in a home, studying more advanced phases of cooking and sewing, in evening classes.

9 (Definition). **Preparatory evening vocational schools** are those in which is offered vocational training unrelated to the occupation followed by the student during the day.

Few satisfactory examples are yet available as to profitable evening preparatory vocational education. The time is usually too short, the student too tired or uninterested to make satisfactory progress. The following examples are suggested: Girls in textile mills studying homemaking, the latter work being divided into short units, such as shirt-waist making, the preparation of lunches, laundering, etc. (as now provided in special legislation in Massachusetts); a bookkeeper taking machine-shop practice, with a view to becoming a trained worker upon a special machine; a clerk studying, in an evening law school, for the purpose of passing bar examinations.

It is important to consider how far preparatory work in evening vocational schools may be developed in the future on what is known as the "short-unit" basis. The most successful extension work in evening schools of a definitely vocational character is now organized on the short-unit basis, which means that the learner is enabled to acquire skill in a particular process, with a particular machine, or to learn how to solve certain problems or to use certain devices, the necessity for which appears in connection with his daily work. It is possible that in evening trade preparatory schools similar results can be procured by a strictly practical "short-unit" organization.

10 (Definition). **Continuation vocational schools** are schools which are attended for a limited number of hours each week, within the customary working-day, by persons regularly employed.

(*a*) Continuation vocational schools, like evening vocational schools, may be "trade extension" or "trade preparatory" schools.

(*b*) In practice evening vocational schools are adapted to workers upward of 17 or 18 years of age, while continuation vocational schools are primarily adapted to young workers from 14 to 18 years of age.

11 (Definition). **Extension continuation vocational schools** are schools giving instruction or practice directly related to the occupations being followed by the pupils.

If the time given to the school is considerable—perhaps alternate days or weeks, or a half of each working-day—then such schools are often called "part-time schools." Many, if not all, of the great variety of occupations followed by young persons offer opportunities for supplemental or extension training in vocational schools on the continuation basis. The following are examples: A messenger boy learning the geography of the community in which he works in order to improve his efficiency as a messenger; a machinist being taught in short-unit courses a variety of devices and operations essential to his advancement or greater efficiency; a salesgirl being taught devices of salesmanship; a farmer being taught particular phases of tillage, animal husbandry, etc.

12 (Definition). **A preparatory continuation vocational school** is one which undertakes to teach the student a new trade or other occupation, or to give him an essential part of the training required for such trade during hours in which he is in attendance.

13. **Modified forms of continuation vocational education.**—Various modified forms of continuation vocational education exist, according to the character of the occupation followed and the time available for related study.

Part-time vocational education includes plans whereby young people regularly employed are released for regular periods, sometimes alternate weeks, in order to obtain instruction and practice in matters related to their ocupations. Farmers during dull seasons attend the short courses offered under extension agencies or in agricultural colleges. Apprentices are sometimes sent away to other establishments for temporary employment, primarily to learn new or related processes. Physicians in practice sometimes engage in hospital practice for short periods, in order to obtain new knowledge. In Germany and England the more capable workers in certain technical trades are sent to special schools for limited periods to acquire mastery of mathematical and technical processes needed in order to become foremen or overseers.

"Improvement" or "general" continuation schools, not of a vocational character, are common in Germany and are found at present in two or three States of the United States. These aim to utilize the continuation period of instruction to further general education.

VI. ADMINISTRATION OF VOCATIONAL EDUCATION.

The administration of publicly supported vocational education involves the same problems as those found in the public control and direction of general education. The relationship of the administrative organization of general education to the administrative organization of vocational education introduces questions of "dual" versus "single" control. The types of schools and the internal organization of schools introduce problems of differentiation of schools, and divisions and departments within schools.

1 (Definition). **Dual administrative control** of education exists when, either in the State or in the local community, or in both, the agencies for the control of vocational education are distinct from those for the control of general education.

Examples. In Massachusetts for several years a commission on industrial education had complete authority over industrial schools on behalf of the State, its operations having no connection with those of the existing State board of education. In a few Massachusetts communities, separate boards of trustees are in charge of industrial schools.

2 (Definition). **Single administrative control** is found when vocational schools are organized and supervised by the same authorities as those charged with responsibility for general education.

In Massachusetts at the present time, the State board of education exercises certain functions alike with reference to vocational and general education. In most Massachusetts communities, a local school committee, working through a superintendent of schools, is in charge of both forms.

In practice, neither dual nor single control is found in a pure form. Experience shows the wisdom of arrangements whereby, in communities properly appreciative of vocational education, there shall be ultimate single control, but with a differentiation of specific agencies for the direction and supervision of each form of education.

For example, in Massachusetts a single board of education, working through a commissioner, supervises on behalf of the State vocational education and so much of general education as it is authorized to supervise under the law. Under the commissioner, however, is one deputy commissioner designated to deal with vocational education, and another deputy commissioner to deal with other forms. Wisconsin, Indiana, New York, Pennsylvania, and Connecticut present examples of more or less modified forms of control. In some instances, where separate local boards exist, the board for vocational education may be created by the board in charge of general education, or the two boards may have common membership.

3 (Definition). **A vocational school** is an organization of instructors, pupils, courses, buildings, equipment, etc., devoted to vocational education for one or more distinct vocations.

An analogy is found in university organization, where, under one general control, departments, or schools for the teaching of the various professions and the liberal arts exist.

4 (Definition). **A vocational department** in a vocational school is an organization of teachers, equipment, etc., designed to train young people for a single recognized occupation.

Thus, a vocational industrial school may have departments for the training of plumbers, patternmakers, cabinetmakers, printers, etc., and experience may show that very little of the actual training required for these different occupations will be alike or in common. A vocational commercial school might have departments for the training of accountants, stenographers, clerks, salesmen, etc. A department of "general instruction" in a vocational school is an organization of teachers, equipment, etc., designed to give the nonvocational instruction required in common by several departments of a vocational school.

5 (Definition). **A division in a vocational school** includes two or more departments dealing with related materials, and involving, to some extent, related processes.

Thus in a large vocational school there might be a wood-working division embracing such departments as patternmaking, cabinetmaking, and house carpentry; a machine-shop division; a printing division, etc.

6 (Definition). **A departmental advisory committee** in the administration of vocational education consists of two or more persons, preferably representing, respectively, employers and employees in a given vocational field, for which the department to which it stands in an advisory relationship is giving vocational training.

The successful administration of vocational education under public control requires the active cooperation of representatives of the occupations for which training is being given. A useful means to this end, where vocational schools are under the general direction of the regular school authorities, is the advisory committee consisting, in the main, of employers and employees in the particular industry for which a given department is offering vocational training. Good administration requires that the advisory committee shall be brought into intimate consultative relationship to all new proposals as to standards and conduct of vocational training in the department concerned. The responsible head of the department must, in an executive capacity, be responsible for securing the conditions which shall enable the advisory committee to be active and effective.

VII. PRACTICAL ARTS SCHOOLS, DEPARTMENTS, AND STUDIES.

In private and public schools a variety of studies and practices have developed during recent years that may be described collectively by the words "practical arts." Various forms of practical arts education are to be sharply distinguished from vocational education. Experience proves that practical arts training, of one form or another, may make valuable contributions to general education. It is not yet evident that practical arts education, as ordinarily carried on, makes substantial contributions to vocational efficiency. It may be made to affect vocational choice and perhaps stimulate vocational ideals. Among the forms of practical arts education are these:

1. **Manual arts training in lower grades.**—Manual training in lower grades is that form of practical arts education in which boys and girls, usually during the work of the first six grades, have practice with a variety of exercises or projects resembling projects carried on in practical life.

This manual training includes whittling, clay modeling, paper folding, picture mounting, needlework, weaving, and a variety of other constructive activities within the range of the experience of children under 12 years of age. In this work, boys and girls usually do the same exercises, and these are taught by the regular class teacher.

2. **Manual training in upper grades and high schools.**—Manual training in upper grades and high schools, as the term is now used, applies mainly to wood and metal working, including at times printing, bookbinding, and various forms of constructive work as arranged for boys from 12 to 16 or 18 years of age.

In this field of manual training, well-defined programs of bench, forge, and metal working are now found. This work is usually taught by a departmental teacher.

3. **Household arts for upper grades and high schools.**—Corresponding to manual training for boys from 12 to 18 years of age are now found in upper grades and high schools a variety of practical exercises in cooking and sewing, and occasionally in other home-making fields, designed to give girls from 12 to 18 years of age insight and taste with regard to domestic operations.

In forms slightly, if at all, modified the same subject is called "home economics" and "domestic economy." Sewing and its allied lines are sometimes included under the term "domestic art," while cooking and its allied lines are sometimes called "domestic science."

4. **Agricultural arts education.**—In some elementary and high schools exercises based principally upon tillage are now found as constituting a phase of general education. In some cases home gardening, school gardening, and laboratory work in agricultural science are added, as well as reading exercises regarding live stock, etc.

5. **Commercial arts or business education.**—In elementary and high schools a variety of studies and practical work in bookkeeping, typewriting, commercial paper writing, and the like have been introduced in recent years, but no real distinctions between "vocational" commercial education and "general" vocational education have yet been made.

6. **Practical arts high schools.**—Under the influence of the movement for manual training a variety of special forms of high schools have developed, each frequently with some special characteristics. They are variously known as "manual-training high schools," "manual-arts high schools," "mechanic-arts high schools," "technical high schools," etc. A practical-arts high school in Boston is organized for girls' work in household arts exclusively. Technical or manual training high schools frequently have departments of household arts for girls.

VIII. PREVOCATIONAL EDUCATION.

1. (Descriptive). Within the last few years the term "prevocational education" has been introduced into educational literature, apparently with several meanings.

(*a*) The term "prevocational education" sometimes refers to studies and practices which, while not constituting a specific part of vocational education, nevertheless, are assumed to be a valuble or even essential preliminary thereto.

In a broad sense, ability to read and write is preliminary and essential to almost any form of vocational pursuit under modern conditions. Similarly, a knowledge of arithmetic is essential as preliminary to the commercial and many other callings. In professional education biology and chemistry, for example, are frequently spoken of as "prevocational" to the study of medicine; history and economics to the study of law; Greek and Latin to the study of theology; mechanical drawing and trigonometry to the engineering professions, etc. Similarly, it has been held that manual training or sloyd (tool work with wood and metals) can be "prevocational" to the mechanical trades. Whether any particular study "functions" as prevocational training can, of course, be determined only by observation and experiment.

(*b*) The term "prevocational education" at present seems more commonly to be used to designate programs of instruction and training designed to assist an individual in making an intelligent choice of an occupation, through giving him opportunity to participate in a series of practical experiences related to many vocations.

For example, it has been asserted that manual-training courses are, or can be made, of value in enabling a boy to "find himself" as regards his natural aptitudes for some one of the tool trades. Similarly, it has been asserted that so-called "commercial" studies and practices as found in public high schools enable the youth to "find himself" as regards his aptitudes for some commercial calling. It has been claimed that students taking mechanical drawing frequently discover from this their qualifications or lack of qualification for various trades in which mechanical drawing applies.

(*c*) The importance of prevocational education of the type described under (*b*) increases in proportion as intelligent vocational guidance develops, on the one hand, and varied opportunities for systematic vocational education are established, on the other. We may assume that, in time, in any urban community a large number and variety of departments of vocational education will be open to a youth at 14 or 16 years of age. It will be important that the youth choose wisely the school which he shall enter. It is not economical on the part of a vocational school to admit a considerable number of persons who must early be eliminated because of innate or other disqualifications for the work selected. If programs of prevocational education can be developed which will accomplish this end, much good will result.

It has been suggested, for example, that through the seventh and eighth grades, instead of the present somewhat rigid courses in manual training, there should be presented to boys a large variety of opportunities to participate in constructive and practical work along industrial, agricultural, and commercial lines. The exercises and opportunities for practical achievement should be related as closely as practicable to various occupational pursuits as now followed. Considerable opportunity for election should be given, and for the early giving up of uncongenial forms of work. Good amateur standards should prevail in this work, rather than so-called "professional standards." The teachers should be persons possessing varied forms of skill and wide industrial experience, selected with a view to their capacity to advise boys wisely as to vocations in which they would probably succeed. Similarly, it is suggested that opportunities could be provided for girls to "find themselves" in homemaking, industrial, and commercial pursuits.

(*d*) The problem of the immediate future is to define the purposes of prevocational education, if useful purposes can be found, and then to adapt programs of practice and instruction to the realization of these ends.

2 (Definition). **Prevocational education** includes any form of education designed to enable a youth to discover for which one of several possible vocations he is best fitted by natural ability and disposition, the program of instruction and practice for this purpose being based mainly upon actual participation on the part of the learner in a variety of typical practical experiences derived from the occupations involved.

IX. VOCATIONAL GUIDANCE.

1 (Descriptive). Vocational guidance represents an attempt (first through philanthropic initiative and support, and later appearing through agencies for public education) to lessen the misdirection of energy and general loss of effectiveness at present involved in the efforts of young persons, especially in urban centers, to find suitable employment.

The historic agency of vocational guidance has been the home. Under primitive and settled conditions, the occupation of the child usually followed that of the father. In the modern urban community, the home becomes less and less adapted to giving effective vocational guidance. There is also available, now, a large amount of organized knowledge as to hygienic conditions surrounding any given field of work, the requirements which such work makes for intelligence or special training, etc., which can be imparted by organized effort. As conditions now exist, youths are commonly unprepared to take advantage of the opportunities for becoming more efficient and for promotion.

2 (Definition). **Vocational guidance** includes all systematic efforts, under private or public control, and excluding the traditional activities of the home, the conscious and chief purpose of which is to secure the most economical and effective adjustment of young people to the economic employments which they can most advantageously follow.

Examples of the various means now employed, at least occasionally, for this purpose are: (*a*) Selected readings given under the guidance of the school, with a view to conveying information as to economic activities, the qualities demanded in the various vocations, etc.; (*b*) systematic reading and study of specially prepared pamphlets descriptive of the opportunities, requirements, etc., of various particular lines of employment—usually given under the direction of teachers—(*c*) individual or group conferences of pupils with teachers, for the purpose of discussing vocational opportunities, conditions required, etc.; (*d*) systematic study of young persons from the standpoint of their physical and intellectual make-up, with a view to advising them as to lines of employment which they can most effectively enter; (*e*) "prevocational training" (see page 69), consisting of limited amounts of practical experience in connection with exercises taken from various lines of practical work, with a view to discovering the pupil's fitness therefor, or enabling him to discover his own more fundamental aptitudes and interest; (*f*) systematic study of various economic lines of employment, with a view to obtaining specific data to be used in advising young persons seeking employment; (*g*) maintenance of employment agencies for young persons in day or evening school, with a view to assisting them to obtain work in suitable occupations.

Vocational schools in general, in more or less organized forms, offer vocational guidance and act in a measure as employment agencies in placing their graduates. This is especially true of normal schools, industrial schools, commercial schools, technological institutions, and universities.

Chapter IV.

SOME WAYS IN WHICH VOCATIONAL EDUCATION MAY BE INTRODUCED.

The introduction of vocational education into any community at the present time is dependent upon certain rather clearly defined factors which are peculiar to this type of educational development. Among these are the lack of a body of preconceived notions of educational theory in this field, the recent demands of industry for trained workers, the failure of industry to be specific as to those demands, and the failure of the public schools to meet fully the needs of a large mass of pupils in the schools after the age of 14.

Experience is increasingly recognizing the fact that vocational education is a local and not a general issue. That is to say, its content and method as well as its organization must be adapted to the social, industrial, and educational conditions of the community, all of which conditions differ with localities. These conditions are obviously different in a New England textile city from those of an agricultural community. They are different also in a large city with greatly diversified industries from the conditions in a city with a single dominant industry, and different again in a community of from 10,000 to 25,000 inhabitants from those in a community which is either larger or smaller.

The above facts would therefore seem to indicate the need of a careful systematic analysis of all the conditions involved before the introduction of any system of vocational education is undertaken. Nor should such an analysis or survey be carried on by the school men alone. The close cooperation of employers and employees in the trades and vocations of the town is needed, if effective thinking and action are to result. To be more specific, it would appear that the most effective means of bringing about the additional equipment for vocational training is through the enlistment of the united interest and support of all forces working for community betterment; such as boards of trade, labor organizations, civic and educational associations, etc.

It is also clear that, in order to meet the exigencies of a changeable public opinion, such an analysis will require a democracy of interest. This will involve the inclusion of all forces of whatever nature at work in the community, if the result is to be permanently worth while. Although it may be objected that this method is somewhat cumbersome and slower in operation, it is given emphasis here because of the well-known fact that several sincere and well-intentioned efforts have been ineffective through failure to use in a democratic way certain available sources of interest and help. It has been found, therefore, that full cooperation within the community itself may be best secured by the backing of a central board or a central committee made up of representatives appointed from the several organizations and interests which are in any way concerned. Such a committee in every case should include persons from the industries, both employer and employee, from the lay public, and from the school public.

The securing of such public interest and support requires a continuous campaign of publicity which will attract public attention sufficient to bring about a local demand for such an investigation and report. It would add materially to its value were such a report to thoroughly analyze the local situation and through constructive recommendations point out a line of action which appears to be reasonably easy of accomplishment and most likely to be effective. Such a comprehensive study might secure added strength, probably greater interest, and possibly more nearly convey the full meaning of the movement were it to be designated a "survey."

Such a survey will of necessity be quite inclusive. It should keep clearly before it the facts concerning each phase of the situation to be studied. It should be both comprehensive and detailed. It should recognize all interested parties. It should eliminate no factor, however simple, which would seem to have a bearing upon the solution of the problem. The necessity, therefore, for arousing all of the dormant forces in the community is apparent. The successful completion of the undertaking will depend quite as much upon the extent and strength of the movement as upon the actual installation of the work. For the purpose of starting in the right direction, as well as for utilizing the varied forces in the most helpful way, the following suggestions are made. They show rather clearly definite steps which may be taken to foster an interest in vocational education which may later result in a definite demand for a survey of local conditions.

1. *By preparation and distribution of publications.*—The purpose of such publications should be not only to give accurate information in convenient form, but to present favorable arguments based on local facts and needs. These might be accompanied with, or followed by, publications from outside sources and from authorities on the subject.

The support of local newspapers should be secured in the printing of press articles and editorials on the subject. Newspapers afford one of the most effective means for creating interest in the subject and for bringing about on the part of the public an understanding of the aims and purposes involved to an extent which will seem favorable to public action and support.

2. *By meetings to create local interest.*—(*a*) Holding of conferences at which speakers from within the city or town may tell of needs as they see them, or speakers from out of town may be secured to tell of what other places have found out and done.

Such conferences may be in the form of luncheon or dinner meetings or they may be of greater length, at which specific questions may be taken up and discussed.

At each conference on the subject the use of lantern slides and moving pictures will serve as effective means for impressing those present with the need and possibilities of vocational education.

Slides are obtainable from many State and city departments of education and a number of reels showing vocational institutions have been made by the National Manufacturers' Association; the United Shoe Machinery Co., of Beverly, Mass.; and the National Cash Register Co., of Dayton, Ohio.

(*b*) Holding of exhibitions.—Conferences may often be combined with the holding of exhibitions of school work done either locally or abroad, although the combining of the two is not essential. Care should be taken that any such exhibitions be made with due regard to satisfactory display and in a form of presentation which will attract interest and tell a story which can easily be appreciated. They should be given in places easy of access or in places where the people whom it is desired to reach are likely to congregate.

It has been found to be of little value to present exhibitions that do not carry the story to people by an appeal through motion and color, as well as through the intellect.

At an industrial and commercial exposition held under the auspices of the Boston Chamber of Commerce the education committee of that chamber secured the cooperation of public and private school authorities, in planning and carrying out an unusual educational section to that exposition.

In the idea of its presentation and the scope of the work shown, the exhibit was unique, not only in being a fairly comprehensive showing of the opportunities for industrial education in Massachusetts, but especially in its presentation of these opportunities by types instead of by individual schools, the separate institutions subordinating themselves for the sake of giving to the public a clear impression of the chief methods of meeting this important problem.

In connection with this same exhibit there was issued a joint circular, presenting in a brief form the opportunities for vocational education available in Boston and vicinity; and as a further valuable result, there was brought about a joint movement among those in charge of such education to prevent unnecessary duplication and to secure the benefits which come from cooperation.

Other notable examples of the effectiveness of such exhibitions were those of the education department of the Philippine Islands and of the Massachusetts exhibition of vocational education at the Panama Pacific Industrial Exhibition. Exhibitions offer an opportunity to distribute in an effective way literature dealing with the subject.

Publications that will be helpful in the preparation of publicity material are those issued by (*a*) National Society for the Promotion of Industrial Education; (*b*) Russell Sage Foundation; (*c*) Trade-unions; (*d*) Manufacturers' organizations; (*e*) State education departments; (*f*) The United States Government.

3. *Central committee.*—After a favorable public interest in the local situation has been awakened, the community itself will see the need of the appointment of a central committee. As previously indicated, this committee should represent a variety of interests. It should be democratic both in its composition and in its action. It should organize in the usual way, with a chairman and secretary, and possibly with subcommittees to look after specific details. Among its first duties will be a continuance of a policy of publicity in regard to community needs, community possibilities, and community limitations. A partial recognition of these needs, possibilities, and limitations should soon result in a desire on the part of the committee for a more detailed study of the local situation than can be made by any body of busy men engaged in their own occupations. This will pave the way for the appointment of a person to organize and carry forward a detailed study or survey of the exact local conditions. It will become evident that no preconceived notions of education nor prearranged plan for such a survey will actually meet the local necessity.

4. *Preliminary considerations.*—Previous to the selection of a person to carry forward such a survey certain pertinent facts should be borne in mind by the committee:

1. That whatever differences there are between the members of the group as individuals, they all must unite upon the one idea of getting at the actual facts.
2. That neither partiality nor prejudice should sway the committee to draw conclusions or make deductions until all of the facts bearing upon the situation have been presented and analyzed.
3. That local pressure and local bias for any particular plan shall be withstood, except in the light and bearing which such expressed opinion may have upon the situation, when a full knowledge of the facts has been ascertained.
4. That above all a spirit of openmindedness, cooperation, and good will shall pervade the committee in its work. With such a series of understandings carefully organized and agreed upon the committee should proceed to the selection of a competent surveyor.

5. *Surveyor.*—It is at once recognized that it will not be possible for every town or city to secure the services of a professional experienced surveyor. In many instances it will be necessary to select the best person who at the time is available for the work. In general, it may be remarked that the one who is in charge of the survey should be a man with breadth of outlook, careful judgment unbiased by prejudice of any sort, considerable initiative, organizing power, some capacity for the interpretation of the facts obtained, and a fairly wide knowledge of school, social, and industrial conditions. In short, he may well be selected with the thought that he is to become later the director of vocational education in the community in which he has made the survey.

6. *The survey.*—As yet there is lacking both sufficient experience and agreement on the part of investigators to justify the setting up of specific methods for organizing a vocational survey. There are, however, certain deductions which may be made from existing surveys which are of material assistance in the formation of plans for a specific survey. For example, it will be necessary to know something about the social, economic, industrial, and educational conditions within the given municipality. It will be left to the director of the study to interpret the data gathered and to translate them into terms of local activity or into terms which shall give to the town or city certain rather definite reasons either for establishing particular types of schools or rather more definite reasons why no vocational schools, as such, should be established.

Inasmuch as the gathering of data and their interpretation are to be centered in the one individual, the following suggestive outline has been prepared, not so much showing a complete program as pointing out a line of attack which heretofore has been found to have sufficient merit to be workable. While possibly not all of the steps indicated have been utilized in any one study, each of them may be found as a part of some individual study.

1. *Facts about the People.* (While this may be somewhat too inclusive as a major division, it is used here in the restricted sense of a single locality.)
    - (*a*) Population extent. The whole program will depend much upon the size of the community.
    - (*b*) Migration. That is to say, whether or not the population of the city is stable or movable.
    - (*c*) Conditions as to type.
        - (1) White or colored.
        - (2) Native or foreign born.
    - (*d*) Illiteracy.
2. *Economic Factors.*
    - (*a*) Tax rate, local and State; the whole tax burden.
    - (*b*) The indebtedness of the town or city.
    - (*c*) Conditions of waste in the expenditure of all public moneys.

2. *Economic Factors*—Continued.
    - (*d*) Possibilities for effecting economies by a reorganization of the present system of education.
    - (*e*) The amount of school funds, from whatever source, available for local use.

3. *Industrial Factors.*
    - (*a*) Apprenticeship.
        - (1) How extended.
        - (2) Lack produced what result.
        - (3) How to supply lack.
        - (4) Not needed because of type of labor employed, mature workers only, etc.
    - (*b*) Whether there is a content of technical knowledge or skill in any job that can not be acquired through routine work and for which special instruction is needed.
        - (1) If so, what is it?
        - (2) Whether it can be best imparted by provisions inside the industry.
        - (3) If not, whether it is worth while to provide for such instruction through outside agencies.
        - (4) If this is true, whether such instruction shall take the form of—
            - (*a*) All-day industrial schools.
            - (*b*) Trade schools.
            - (*c*) Part-time industrial classes.
            - (*d*) Evening classes.
        - (5) Whether there are any jobs for which it is not desirable either to direct the youth or to train him at public expense.
        - (6) What number of new workers could be prepared for any job, if it has a teachable content, without overstocking the market.
        - (7) What kind of equipment as to age and physical and mental assets the workers should have for the job.
        - (8) To what extent does the industry select its workers for any job so as to secure those best adapted to it.
        - (9) Whether their market is overcrowded.

4. *School Factors.*
    - (*a*) The number of children leaving school each year.
    - (*b*) The nationality, age, and schooling condition of those withdrawing.
    - (*c*) The economic condition of those withdrawing.
    - (*d*) The wages, number of jobs, kinds of work, and advancement of those withdrawing.
    - (*e*) Causes of retardation.
    - (*f*) Causes of withdrawal.
    - (*g*) Education after leaving school.
    - (*h*) Means of getting a job.
    - (*i*) Comparative amount of idleness of nongraduate, graduate, and high-school group.
    - (*j*) The aim, character, and extent of prevocational training in the elementary schools.
    - (*k*) The aim, character, and extent of manual training in elementary and high schools.
    - (*l*) The aim, character, and extent of the evening schools.

Chapter V.

METHODS OF ORGANIZATION.

As a result of a local survey, it is assumed that some form of vocational education should be undertaken. The particular type of such education to a considerable extent will indicate the method of organization. To avoid future complications and misunderstandings, the details of the plan should in all cases be determined so far as possible previous to the actual inauguration of the work. It should also be clear that in most of the States the local authorities will be the initiators of the work and will have the responsibility for its successful operation. In some States the central authority of the State will assist in the preliminary steps, will set standards and requirements, will approve the actual plans in advance, and will share in bearing the financial burdens.

STATE ADMINISTRATION.

It will be found in most States that there are certain legislative enactments and requirements which affect the installation of vocational work. It may be found in some of the States that the State constitution itself, as well as some of the legislative enactments, while not prohibiting, may, by restrictions as to compulsory attendance, etc., practically prevent the local authorities from undertaking this work. In short, these requirements will afford an effective barrier against any form of vocational education for persons between the ages of 14 and 18 years.

At the present time in several of the States direct provision has been made for the sharing of responsibility, both educational and financial, by the State. In other States it will be found that certain State funds may be transferred or made available for this work. This may be particularly true in those States in which there is a large income from excise taxes, and the various school funds established under the act can be utilized.

The central State authority in some States will have the power to set up certain definite standards and requirements as to the qualifications of the officers and instructors who are to have charge of this work in a given community. For example, some States have gone so far as to say that a person in charge of vocational work should be

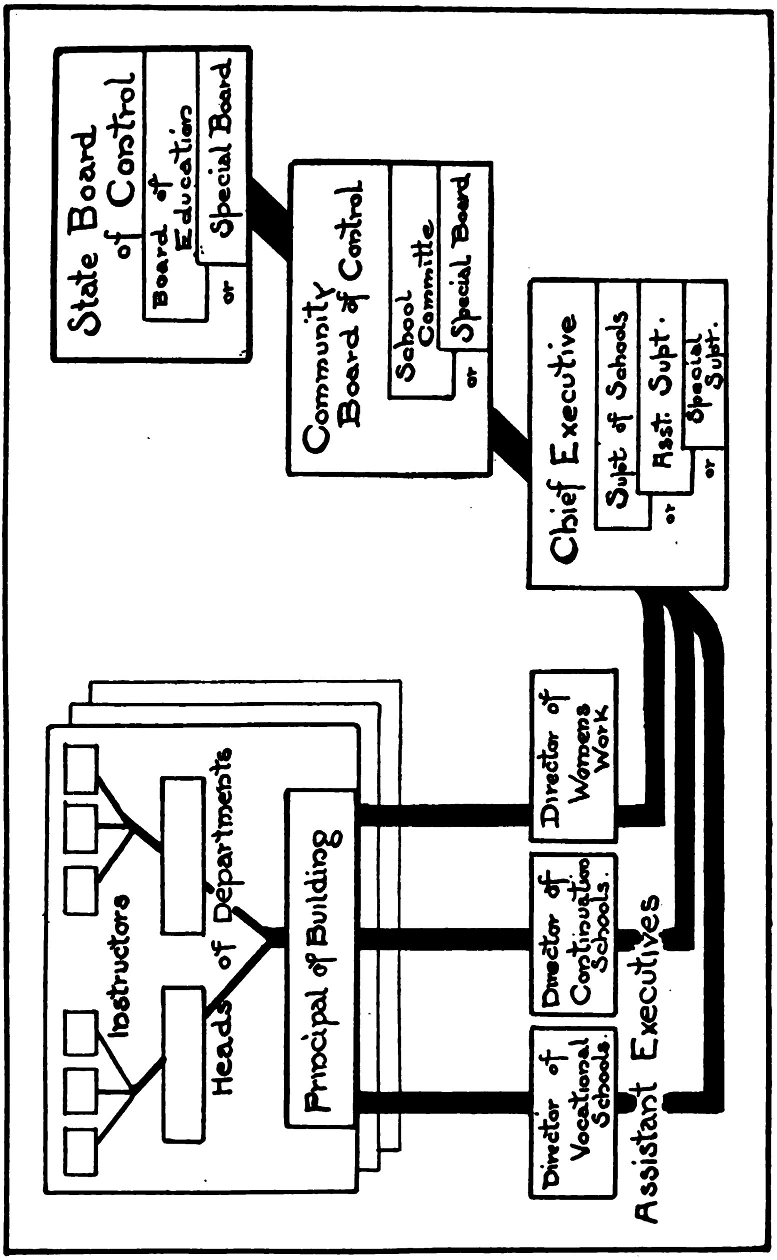

CHART I.—ORGANIZATION.

a person acquainted with the needs of the industry as well as with certain and somewhat definite educational equipment. It has been determined also that the instructors for trade work shall be persons who have had a considerable background of actual experience in the trade which they are to teach, that the instructors who are to teach the technical studies which are related to the work shall be persons who have a considerable acquaintance with the trade or industry for which the instruction is to be given.

Again, the State may set up certain definite restrictions and requirements as to types of buildings, whether or not the work shall be carried on in a school building or factory building, in a building erected especially for the purpose, or in an old school building which has been reconstructed in such a way as to be most effective for the teaching of the trade in question. The State may even go so far as to determine the type of equipment which shall be used in each school, whether or not modern machinery shall be installed, or whether it seems more advisable to utilize machinery of a slightly earlier day for the purpose of meeting the local situation.

In some cases the State will insist upon a review and approval of the course of study to be offered before such courses of study are put in operation. In many cases this may forestall the inauguration of courses which will fail to teach the trade effectively. These courses will vary considerably in accordance with the needs of the particular industry. The person preparing the same should keep clearly in mind this objective; otherwise it will be found necessary continuously to revise and modify the courses to such an extent that it will be difficult to do satisfactory work. Another requirement which may often be established has to do with the person to whom this type of education shall be offered. That is to say, it may be offered only to persons of a certain age, from 14 to 16 years or from 14 to 30 years; it may be offered to persons with a previous grammar-school education or to persons who have completed the regular school work of the seventh grade; or it may be offered only to those persons engaged in the particular trade or in some branch of the particular industry for which the instruction is to be given. Certain other limitations may be placed upon the work by the State, such as the size of classes, length of time to be allowed each subject, length of time to be devoted to a single operation, length of time necessary for the full completion of the course. These requirements and limitations may be set up by the State for the purpose of providing standards of judgment, which may be used for approval or disapproval of the school. In many cases they will be set up as a condition for reimbursement by the State. In these cases it may be necessary for the local community to provide not alone for the pupils resident in that particular community but for nonresident pupils. In all cases, previous to the actual inauguration of the work, the local authorities should become familiar with these exact requirements and limitations set up by the central State authority, for in this way will be avoided opportunity for misunderstandings and possible friction.

LOCAL ADMINISTRATION.

In all probability the most effective organization for the introduction of vocational education into any community of ordinary size will be the school committee of the town or city. This school committee, of its own initiative or through the initiative of its paid executive, the superintendent, will be the most likely to become interested in providing, first, for a type of training which shall meet the needs of that group of pupils who can not or will not profit by the general education or by the various arts courses which are ordinarily offered by the regular schools; second, a type of training which shall provide rather definitely a type of education which shall enable boys and girls of these ages to meet more effectively the requirements of an industry which, for economic or other reasons, they are obliged to enter at comparatively early ages. Furthermore, it is probably true that, because of economic and strategic reasons as well as because of lack of organization and manipulation, the school board will for some time be the most acceptable means for the successful administration of this form of education.

It should not be overlooked, however, that there are certain extraneous factors which enter into the permanent progress of vocational education. The factors are so well known that extended comment is unnecessary. They may be mentioned here to serve only as a guide to what experience has proven to be one of the best ways in which to secure the full cooperation of all forces in any way interested. It is clear that a group of manufacturers or a group of workers know more as to the requirement of a given industry than do a group composed, it may be, of professional men, general business men, and in many instances of women who make up the average school board. It is necessary, then, to provide some means by which those actually engaged in the administration of this work can be assisted and to some extent at least guided and directed by those intimately acquainted with the industrial conditions of the immediate locality. Again, those who have had to do with the introduction of the work, with the conduct of the survey, and with the recommendations made therein will be in a position to give more intelligent assistance than can be afforded by a group composed of persons who are unacquainted with these details. For these reasons it is highly desirable that the survey committee be continued as an advisory board to act in conjunction with the executive officer in charge of this work. In case it appears impracticable to continue the survey committee in every case, there should be appointed an advisory board composed of employers and employees as well as laymen. While this board will act in an advisory capacity only, it will serve as a sort of clearing house through which the executive officer can forestall difficulties as well as readjust his own action and thinking, so that the work done will more nearly meet the needs of the worker and the work.

The foregoing plan places clearly the responsibility for the conduct of vocational education. In most communities the executive officers and workers in the field should be planned somewhat after the following arrangement:

1. Chief executive officers:
    - (*a*) Superintendent of schools.
    - (*b*) Assistant superintendent of schools.
    - (*c*) Special superintendent of schools in charge of vocational work.

In actual practice each of these three methods may be found. In any case they will vary with the size of the community and with the extent of the work to be done in vocational education.

2. Assistant executive officers:
    - (*a*) Director of vocational education.
    - (*b*) Director of men's work.
    - (*c*) Director of women's work.
    - (*d*) Director of homemaking.
    - (*e*) Director of continuation schools.
    - (*f*) Director of evening industrial schools.

Again, the necessity for these several directors will depend upon the size of the town or city and upon the number of activities to be undertaken in the particular field of vocational education. In the smaller city, in the city of one industry, as well as in the city which is to attempt to provide for only one of the types indicated, all of the duties will devolve upon one person. In some cases it will be necessary for the superintendent of schools to serve both in the capacity of supervisor and that of director. Hence, while the foregoing analysis sets up something of an ideal situation, there will no doubt be found necessary many modifications to meet the specific situation to which these principles may be applied.

3. Principals of separate buildings which have been set apart for instruction in vocational training.

As in the case of principals for schools of general education, the duties of this office may be either administrative and supervisory, or they may be a combination of these functions with those of instruction. For purposes of clearness in the differentiation of this work and general education, it would probably be better to denominate these men directors of buildings. In many instances it may be found necessary or advisable to place this work under the same roof as that of general education. In such cases the term principal should be retained.

4. Heads of departments:
    - (a) In a vocational school.
    - (b) In a department of a vocational school.
    - (c) In a department for vocational education in a general secondary school.

The suggestion is made here that such persons be denominated "directors" of this or that department rather than as heads of departments. It will occur that an overlapping of function will appear to be present; nevertheless, for purposes of clarity and actual ease in understanding by the laymen, it is advisable to distinguish in a rather definite way between the heads of departments in general education and the directors of departments in vocational education.

5. Instructors:
    - (a) In industrial subjects—
        1. Shop operations.
        2. Shop practice.
    - (b) In special technical subjects—
        1. Drawing.
        2. Chemistry.
        3. Physics.
    - (c) In academic subjects—
        1. English.
        2. Civics, etc.

QUALIFICATIONS OF DIRECTORS AND INSTRUCTORS.

In the case of each of the several officers and instructors enumerated above, as previously indicated, there should be set up either by State or local requirement somewhat specific standards of attainment and qualifications. Until the work of vocational education has had a longer opportunity to crystallize, it will be necessary to use good judgment and common sense as to the administration of those standards. There are, in the main, four divisions into one of which all those who are immediately occupied in carrying on vocational education will naturally fall:

1. *Directors of schools and directors of departments.*—The principal or director of a vocational school should have had a thorough academic training and preferably experience with different lines of public-school work. He must be in sympathy with vocational education, have the vocational point of view, and sufficient technical and practical knowledge to enable him to administer the vocational work.

2. *Shop and vocational instructors.*—The shop instructor must know his trade as fully as does a skilled journeyman; and in addition must have the knowledge of the technical method in use in the trade, together with a command of its drawing, mathematics, science,

and art; he should further have a general education not less than that represented by elementary school graduation or its equivalent.

He should have some command of the technique of teaching and school administration, and he must be trained in the application of principles of teaching to industrial-school problems. He should have a background of educational principles, theory, and practice which will help him to understand the aim and place of his own work, and to interpret the social use of the school in which he serves. He must have the ability to make his own work serve the ends for which industrial schools are established, i. e., to fit boys and men for skilled workmanship and intelligent citizenship. He should have, or acquire, a grasp on the economic, social, industrial, and educational history and evolution that have led up to the movement for industrial education in our day.

The shop instructor's personal appearance, manner, and dress must be such as will not be a handicap to him as a leader of boys. He must use judgment and discretion in all matters relating to neatness and cleanliness in person and dress.

His personal qualifications must be such as to establish a presumption that he can perform the duties he undertakes. Consideration must be given to health, strength, and temperament, as shown by his ability to get along with people and his interest in community activities. He should be not less than 25 nor more than 40 years old at the time of entering the work. His habits must be such as will not bring him into disrepute in the school or community, or set a bad example for the students. He should show ability to deal with boys; and successful experience and interest in them and their sports are assets as a teacher. His manner of dealing with boys must, of necessity, be different from that which prevails in a strictly commercial shop.

3. *Teachers and instructors of related subjects.*—The ideal teacher of related subjects whom, admittedly, in practice it would be difficult to secure in large numbers, should have *trade* equipment, teaching equipment, and personal equipment equal to that set forth above for the shop instructor. In addition, he should have had as a minimum in academic instruction not less than that indicated by high-school graduation or its equivalent. He should show evidence of ability to teach the special subjects for which he offers his services by preparation of not less than two years beyond the highest grade he is required to teach. The ability to apply these subjects in a practical way to trade problems is also essential.

A man with trade experience equal to that desired for the shop instructor is best equipped to serve as a teacher of related subjects, but if such a teacher is not available, great care should be taken to obtain such experience or familiarity with the processes of the trade as will equip him to teach his subjects so as to prepare a boy to use them in accordance with the best practice of the trade. The character and extent of the experience that would justify the presumption of ability to teach related subjects will vary for different trades, and can only be determined for any given trade by the judgment of those who have themselves had successful experience in it.

4. Teachers of nonvocational subjects.—The teacher of nonvocational subjects in an industrial school enters a field where few precedents exist. The practical character of the trade work creates an atmosphere which demands a concrete and practical presentation of the nonvocational subjects such as is not common in our traditional schools. A teacher can not expect to teach boys in these schools the same subject matter or by exactly the same methods pursued in high schools. He has a special field, and, to a large extent, unexplored territory. He must take the boys who come to him and so organize the subject matter as to make it an effective supplement to the other work of the school, and so far as possible to function in the life of the pupil.

His teaching equipment, personal equipment, and general schooling should not be less than are demanded for the teacher of related subjects mentioned above. In his special field he needs, perhaps, not more knowledge, but knowledge of a different quality and the ability to organize it. He should have an appreciation of the conditions and problems of modern industry such as can be expected of an intelligent layman, and a knowledge of the more common machines and trade processes carried on in the schools. A man with some natural mechanical ability, even from an amateur standpoint, is more likely to succeed in such work than one whose interests are entirely academic.

Experience as a wage earner is an asset, as it enables one to gain a sympathetic insight into the needs of the worker, to understand the aims and purposes of the industrial school and its responsibility for the pupil and to the industry; and to see clearly the relation of his own subjects to those of his fellow teachers, and the place and bearing of his service on the total service which the school undertakes to render to the pupil and to the industries.

Such a teacher must be able to use material drawn from the world of work in teaching such subjects as civics, economics, industrial history, and English. His work must interrelate with the affairs of the industry and the activities of the school, and on no account should be taught as something remote from the pupil's life and experience. His greatest effort should be to make his teaching of civics and economics develop principles that will enable the pupil as a wage earner to solve successfully his problems as a worker in industry and as an intelligent citizen.

PUPILS.

It has been found by experience that for most purposes the pupils in a school for vocational education should not be less than 14 years of age; that in day classes they should not be more than 25; and that in evening classes the lowest age of admission should be 16 years, with almost no limit beyond the requirement of the industry as to the maximum age limit. The qualifications of the pupils will vary with the needs of the industry. In general, however, they should be persons who have completed the seventh grade of the general school and who show that they are competent to profit by the instruction sought. In the part-time schools, in which approximately one-half time is given to instruction and one-half to the work, and in the evening classes they should in most cases be employed in the same industry as that in which they are being taught specific things concerning the allied trade or industry. The most marked exception to the above condition will be that in the case of "homemaking" for girls and women over 17 years of age.

SIZE OF CLASSES.

Actual practice has fairly established 15 as the most desirable group with which to work to advantage. As in so much of this work, the number of pupils in a given case must depend largely upon local conditions, upon the complications of the trade, upon uniformity or lack of uniformity of intelligence in the group to be taught, and upon the care with which the shop instruction is organized.

FACILITIES.

In general the location and construction of the buildings and the type and extent of the equipment should bear a direct relation to the needs of the pupil, to the needs of the industries for which training is to be provided, to the material prosperity or wealth of the community, and to the importance in which this work is regarded by the citizens.

In any specific case it is obvious that, in so far as possible, the location should be such as to convenience the majority of the pupils who are likely to attend. It should be located also with some regard to the industry, and with due consideration for lighting both day and evening. In actual practice the following provisions have been made for housing this special type of education:

1. The special school erected and fully equipped for this purpose. The best examples of such schools are the private schools, Williamson Trade School, at Philadelphia; the Wentworth Institute, at Boston; and the John S. Rankin, Jr., School, at St. Louis.

The Trade School for Boys, at Worcester, and the Milwaukee Trade School for Boys are examples of public schools devoted entirely to vocational work.

2. The old factory building remodeled. The chief objections to this adaptation will be improper location, inefficient lighting, and inadequate heating. It will have the advantages of adequate floor space, an atmosphere of reality, possibilities for rearrangement and additions and alterations. In some cases these latter may furnish excellent opportunity for constructive work by the pupils. Good examples of this type are the schools at New Bedford and Springfield, Mass., and the industrial school at Rochester, N. Y.

3. The abandoned schoolhouse remodeled as a shop. The chief advantages for this use of an old schoolhouse are the ease of accomplishment, especially during the experimental stages, the probable lessened cost and the creation of favorable public sentiment. Its disadvantages, like those of the old factory, may be location, improper lighting, with the added difficulties of construction, size and shape of rooms, and its appeal to the pupils. It isn't shop enough. Newton, Lowell, and Somerville, Mass., have each adopted this plan.

4. The utilization of a room or rooms in a regular secondary school building, which rooms have been fitted up for this purpose. This plan will be best adapted to the small community and to the community with limited financial resources. It should be clearly understood, however, that this work is conducted upon an entirely different basis from that of the regular high school, that it is proposed to reach a group who have not been prepared for the general secondary education offered in the general school. The requirements for the teachers should be those set up in a prceding section of this chapter, other than those for the general school. In short, the line of demarkation should be sufficiently distinct to make it clear that the pupils in this department are learning to do specific things which will enable them to earn a better living when they finish their training.

EQUIPMENT.

It is an unfortunate thing for an industrial school to have a complete building and equipment turned over to it at the outset. If the pupil is to be adjusted to meet the demands of the industry, his training must be real. If it is real, it must be given in a productive shop, making useful things that can be utilized in the school system or sold on the open market at or above the market price. Schools giving training in such subjects as woodworking, metalworking, electrical working, can readily find use for the work of the pupils either in the building itself or in the school system. Every school should make a part of its own equipment. This has been done by most of the industrial and trade schools. Enough equipment ought to be bought at the outset to start the work. Sometimes an equipment sufficient to give the first year's training is bought, after which the pupils are able to make most at least of the tools and machines and facilities necessary for their further training in the following years.

Where schools find themselves with limited resources at the start, much secondhand equipment for use in the first year of the work at least, can be bought that will serve its purpose well. In the other years of the course, it is necessary to secure the very latest and best machinery, so that when the boy leaves the school he will be familiar with it and can take his place in the shop successfully.

One of the handicaps under which the school shop must always labor is that of keeping its machinery from time to time fully abreast of the best equipment of the commercial shop. It is doubtful whether this can be done altogether successfully. Under the stress of competition, the commercial shop changes its equipment from time to time. The school without such competition is very likely to remain content with machinery that is behind the times. This is one of the strongest reasons why the part-time scheme of education that enables a boy to get the most of his practical training in the industry itself promises to be most effective in dealing with the great body of wage-earners between 14 and 18 years of age.

Many enthusiastic supporters of part-time education have been led to claim that all the equipment the school needs in dealing with the wage-earner for the time which it demands away from the shopwork is a teacher, a textbook, a blackboard, and some desks. In their enthusiasm they fail to recognize the conditions under which most of those who are employed in the industries labor. Large scale production, extreme division of labor, and the specialized machine have supplanted the artisan or tradesman with the machine-worker. The old trades in which men were able to get experience with all the different tools, machines, and processes of their callings are rapidly disappearing. Modern industry does not give the worker a chance to get a broad experience in working with different machines. The typical boy who comes to the part-time school will be one who is spending his entire time at one machine, making one small part or portion of the final output of the factory.

The schools must always take the boy as it finds him and give to him the training he needs. In giving part-time instruction to the worker at the specialized machine, the school must provide under the school roof, if it is to meet modern industrial conditions, a sufficient amount of equipment to enable the boy to get the elementary practice and experience at the machines, with the tools and in the process which the shop denies him and which is necessary to his insight, interest, and growth in the occupation. Every experience goes to show that a minimum amount of equipment under the school roof is necessary as a teaching device which will make it possible for the teacher to closely correlate or connect the instruction which he is giving with the shop processes as they can be illustrated on the machines.

One great mistake which many manual-training and technical high schools have made, and which industrial schools are in danger of making, is that of providing a large number of tools and machines of one kind rather than a smaller number of different tools and machines. There are manual-training and technical high schools in this country where in order to carry on the teaching of pupils in groups enough metal lathes have been secured to provide one for each pupil in the largest section which the school handles. This policy requires both an enormous building with many different shop rooms and a large outlay of money for equipment for the work, much of which is unnecessary and dooms the school forever to a system of training where the pupil is taught by the exercise rather than the job method, where individual instruction has no place, and where the pupils are handled entirely in groups. The same amount of money put into a more varied equipment would enable the school, whether it be a manual-training school or industrial or trade school, to deal with the pupils individually so as to give each a wider range of experience with different machines, substitute the individual for the group method of instruction, and to approach more nearly the conditions of real shopwork so necessary in the proper training for success in the industries.

KINDS OF SCHOOLS.

Any adequate program of vocational education must provide instruction both for those who desire preparation for a calling before entering it and for those whose advancement depends upon additional training of some kind after they are employed. In either case the instruction in one or more of the three forms of education—industrial, agricultural, and homemaking—may be given.

Schools planned for these two groups may be generally classified under three heads:

I. The all-day school, where the pupil devotes the entire school day to instruction.

II. The part-time or continuation school, where the pupil having already gone to work devotes a part of the working time for further education.

III. The evening school, where mature workers attend evening classes, receiving instruction supplementary to their day employment.

I. THE ALL-DAY INDUSTRIAL SCHOOL.

The survey will undoubtedly show the presence of a body of children who have left school at the age of 14 (or younger where the law permits), many of whom have not finished the elementary school. Because of their limited education, their lack of skill, and their immaturity, they will probably be found engaged in a variety of odd jobs, shifting about from one occupation to another, with little or no opportunity to advance in either skill or earning capacity beyond that which brings a meager subsistence.

It would appear, therefore, that for this group, who are likely to enter industry early, there is needed a school or courses which will minister to their vocational as well as their civic needs. While the all-day industrial school can seldom teach a trade in the fullest sense of the term, there is a fund of experience which shows that it can do much to prepare girls and boys over 14 years of age for entrance into the trades.

In these schools a close relation must be maintained between theory and practice. Practical shopwork must be supplemented by related studies in English, civics, industrial history and geography, and elementary mathematics, as well as by the science and mathematics underlying the trades. In this way the school will make for intelligent citizenship as well as for superior workmanship in the years to come. Shop conditions must be approached as nearly as possible in the school, and in general the following conditions should be met in the school:

1. Not less than one-half the time of the pupil should be given to actual shopwork, including such calculations and shop drawing as may be necessary to bring the projects of the pupils in the shop to successful completion.
2. The shopwork must be conducted on a productive or commercial basis as distinguished from the ordinary manual-training method of handling pupils in the shop.
3. The instruction must tend to become individual as distinguished from group or class instruction.
4. The shopwork must be carried on as nearly like the work done in a first-class commercial shop as conditions will permit.
5. The results of the pupils' work should be useful articles which can be utilized in the school system or have a market value.
6. The assignment of work to a pupil in the shop should be by projects or jobs.
7. The progress of the pupil through the shop and school should be measured by the projects or jobs which he has completed in a satisfactory manner.

8. The classroom instruction in the related academic subjects, such as arithmetic, drawing, and science, should be closely connected at every possible point with his shoproom experience in order that it may be of immediate practical value to the pupil.

9. Every day industrial school should plan for at least a one year's course and for not more than a four years' course.

10. Every year's work should, so far as possible, be a unit unto itself. Each year's work should be organized and administered in a way that would confer upon the pupil a definite value in vocational training, so that if he should leave the school at the end of the year the instruction could be used by him as a tool in trade for better wage earning.

11. Not less than three (60-minute) hours should be devoted each day to actual shopwork. The school session should not be less than six nor more than eight hours, not counting the recess and noon periods.

12. So far as feasible, instruction should be given in English, history, civics, and other appropriate subjects which would tend to make the pupils self-helpful, intelligent, and worthy citizens. The end of the vocational school should not be merely to produce a technically competent workman, but a *citizen of the State* who seeks not only to advance his own welfare through his work, but who is ready and willing to place his efforts at the service of his community and State.

II. THE PART-TIME OR CONTINUATION SCHOOL.

A second group to be considered in providing vocational training opportunities is that made up of young people who have left school before completing their elementary education and who are therefore handicapped by lack of schooling either for successful wage earning or for intelligent citizenship. These young people are neither prepared to choose a vocation intelligently nor to follow it with sufficient prospect of future advancement, because the schools have assumed no responsibility for their preparation for employment before they must become wage earners. Under present social and economic conditions it is probable that the all-day industrial school, when developed to the full, will not reach more than a meager percentage of the youth. By far the largest number must be reached by the part-time schools, which will take a part of the working time of young persons between 14 and 18 years of age for continued education, either along the line of a chosen vocation or of general civic intelligence.

While, therefore, it is important to provide for preparatory vocational training for every boy and girl who can afford to spend even a year or two in school, beyond that which is required by law, it is more important to provide for that great mass of children whose education is at present terminated by entrance to a "job," and whose only prospect for further education is dependent upon its not being divorced from the possibility of wage earning at the same time.

It is also true that to a large extent the schools have abandoned the adolescent wage earner entirely to the shop and the factory and have taken no further responsibility or care for his preparation or guidance, just at the time in his life when he most needs discipline, instruction, and the direction of his newly awakened social, civic, and industrial interests.

Very little, if any, of the work which he is doing is of a character which will permit of directly related teaching, so far as strictly industrial subjects are concerned. The industrial experience which he is probably getting in daily employment is frequently such as to enable him to profit greatly by subjects which, while not definitely connected with his particular job, would nevertheless lead to greater industrial intelligence and greater surety of future success as a trade worker.

Also there are many who believe that, while all-day industrial schools can give general industrial intelligence and helpful preliminary training for entrance to a trade, and that real trade preparation may be given to a limited few over 16 years of age in special trade schools, the understanding of the technical and theoretical part of a trade can in general be mastered only by those who are already engaged in actual practice in that trade. Clearly, therefore, one of the best ways that a small industrial community can provide vocational education is by the part-time plan. This provides for an equitable distribution of the responsibility for vocational education between the shop in which the pupils are employed and the school providing a few hours of instruction each week designed to make the young workers more efficient workmen and better citizens. The two large purposes of part-time instruction may be stated as follows:

1. To increase the general intelligence of young workers and lead them to understand better their social and civic duties.
2. To increase their industrial intelligence and skill and develop capacity for advancement within a given trade where such opportunity exists, or where it does not to prepare for some skilled and remunerative work in another line.

Such instruction will have in mind to provide, among other things:

1. Trade extension for the "next step up" within a given industry.
2. Trade preparation courses for boys and girls employed in juvenile occupations, in order that they may enter other and more favorable occupations when they are older.
3. General improvement courses for those employed in occupations where advancement is dependent upon increased civic and general intelligence.

4. Home economics courses for girls who are employed in any line of industry.

It is clear from the above considerations that part-time education will be of two distinct types, according to the amount of time per week given to school instruction:

First, the strictly part-time vocational school in which approximately one-half of the pupils' time is set apart for the school and one-half in some trade or part of a trade in a shop for which compensation is received.

Second, the part-time school of the continuation type, which is for the purpose of permitting the boy (or girl) for a few hours each week an opportunity to continue his education beyond what was possible under previous conditions because of economic pressure or other reasons.

It follows as a matter of course that the amount and kind of instruction that may be given in a part-time class may vary greatly. As to time devoted to the work, five or more hours may be given to the instruction per week, a day a week, or the half-time plan may be adopted, whereby alternate weeks may be given to the school and shop or farm. Whether the half-time plan or less than half-time plan should be used will depend, of course, upon the facilities which the school has for handling the classes, the amount of cooperation that can be secured from the employers concerned, the class of individuals to be served, etc.

DIFFERENT PLANS FOR PART-TIME WORK.

The following types of part-time instruction are at present being carried on in this country, or have been proposed as practicable schemes for part-time vocational work:

(1) Plans classified according to responsibility of employer.
  - (*a*) *The No-responsibility Scheme,* in which the employer does nothing more than to organize the factory or plant so that the pupils may have time off from the shop or factory during working hours to attend the school.
  - (*b*) *The Part-responsibility Scheme,* wherein the employer, in addition to making arrangements so as to afford time off for the school, pays the pupil for all or a part of the time spent in the school, i. e., pays for half or all the time lost from the business.
  - (*c*) *The Full-responsibility Scheme* prevails when the employer, in addition to arranging his work so as to cooperate with the school, agrees with the school authorities to give the young workers an opportunity to secure the round of experiences at the different machines and processes in the shop which will give them breadth of skill and insight as workmen and enable them to get the necessary instruction to learn the trade in the school. In most cases the learners are paid for the time they spend in the school. This plan is most often used in connection with the more important skilled industries.

(2) Plans classified according to time given to shop and school.
   (*a*) *The Week-about or Half-time Plan*, in which alternate weeks are given to the shop and school. This is sometimes called the two-boy plan, because it is customary to assign two boys to the same task, one working in the shop while the other goes to school and then exchanging places the next week.
   (*b*) *The Less than Half-time Plan:* This includes all plans which give less than alternate weeks to vocational instruction. The work may be arranged so that the learner has eight hours each week at the school, in some cases five hours a week, in still others from two to four hours. It may readily be seen that decreasing the number of hours given to the school decreases the difficulty of securing additional help, but increases the difficulty of organizing the work at the factory so as to permit the shifting of the workers in a manner necessary to permit them to attend classes.

(3) Plans classified according to enforcement.
   (*a*) *Voluntary Part-time Schooling* contents itself with providing a school to give the vocational work and persuading employers, parents, and children to cooperate with the school authorities. Sometimes the employer arranges with the school authorities to have some or all of their young workers take the training by making attendance upon the school a condition for their employment.
   (*b*) *Compulsory Part-time Schooling* occurs when the youth who has gone to work is compelled by law to give a part of his time to the school, and where the employer is required to arrange for time off for the class in order that the child may attend the school. This is the better plan and is the one provided for by the Indiana law.

In the introduction of this work the administrator or director should keep constantly in mind his objective. That is to say, his school or schools should be so organized as—

1. To meet the needs of the specific group of workers which have been found as a result of the survey.
2. To add to the technical knowledge and skill of the workers.
3. To make the instruction efficient.
4. To justify the expenditure of money for its support by the amount of time given to the work and by the amount of benefit derived from such work by the pupil.
5. To select for the school instruction data taken directly from practice of up-to-date industrial establishments.
6. To include at least one study in the course which deals directly with training for citizenship.

III. THE EVENING SCHOOL.

Whereas the part-time school has for its particular province the training of the boy and girl between 14 and 18, the evening school is the only possible means of benefiting the more mature workers who are ambitious to advance themselves. The majority of the workers who are employed in trades must be reached by evening schools, if at all.

Young people often neglect their opportunities. The desire for wages, pure indifference, and other causes induce many to go to work before they receive the advantages of an industrial education, even when it is offered, and to neglect, in many instances, the advantages of part-time schooling unless this is made compulsory by the States. The awakening which often comes after these chances are past leaves the evening school as the sole remaining hope.

So far as evening work for men, at least, is concerned, it is probable that the best immediate returns in increased economic efficiency from industrial or trade training come from instruction in the evening classes attended by adult workers. They have been in the shop long enough to realize their lack of preparation and its practical value; they have acquired sufficient skill and insight into mechanical processes to know what they need and come to the evening class determined to get it. The instruction, when given by a teacher who is himself familiar with the trade, can be made to appeal at every step to the interest and the previous knowledge and experience of the student.

At the present time the need for evening industrial and trade schools is probably at its greatest in this country. It will be used to bridge over the chasm which has resulted from the lack of industrial education in the past. While there will always be a place for the evening school to give many workers the training they need as the next step forward in their callings, a system of all-day and part-time industrial schools will greatly lessen this need. In Germany, as the result of 30 years of progress, they have been largely replaced by continuation schools, which are more and more becoming day schools. "The evening school may be an imperfect and temporary agency, but it is nevertheless the only agency to do a large part of the work which needs to be done."

The time available for vocational instruction in evening classes is so limited that it is impossible to teach both the theory and practice of a complete trade in an evening school. For this and other reasons it has been found by practical experience that productive wage earning can best be reached by a type of instruction which will give the learner help in solving the actual problems he meets in his daily work—courses which will help him forward a step at a time, as it were, in his mastery of that occupation. In giving instruction in evening classes to farmers, for example, such problems as the following might be taken up: Marketing farm products, selecting seed corn, keeping poultry, how to grow tomatoes, etc.

Experience has demonstrated that such short unit courses arranged to meet the specific and immediate needs of the workers provide the best means of giving the needed help. Such courses make it possible for a worker to come into the evening class, take one or more courses and withdraw without interfering with the organization of the school. The work becomes more individual and interesting. Such unit courses may be 1 hour, 10 hours, or 50 hours in length. The following examples from representative occupations and trades will make clear what is meant:

Carpenters' Trade—
- Blue-print reading for carpenters.
- Free-hand drawing for carpenters.
- House framing.
- Roof framing.
- Stair building.
- Shop arithmetic for carpenters.

Machinists' Trade—
- Blue-print reading for machinists.
- Free-hand drawing for machinists.
- Automobile repairing.
- Bench lathe work.
- Tool making.
- Shop arithmetic for machinists.
- Forging.

Unit Courses in Cooking—
- Bread making.
- Cake making.
- Simple family meals.
- Left overs.
- Lunches for the dinner pail.
- Feeding of children.
- Marketing.

Unit Courses in Homemaking—
- Serving of meals.
- Home nursing.
- Care of children.
- Washing and ironing.

Millinery—
- Wire framing.
- Hat trimming.
- Velvet hats.

In contrast to the short unit course is the "long-term single-subject course," which is the course by which subjects have generally been presented in evening schools.

The long-term courses are primarily for those who know with a fair degree of accuracy what they want; for those who are not likely to become discouraged by a too early announcement of the length of time that will be required to reach the goal that they seek; and for those who have sufficient faith in what the school can do for them to make them willing to pay the price in sacrifice of both time and effort that is necessary to obtain the needed training.

These courses may follow a single subject or a single line of work over a considerable period with a large group of students; or they may start with the large group of men and later differentiate the work into several subdivisions with smaller groups. The work, too, may be so arranged as to permit students here and there throughout the course to supplement it with related study selected from other courses. The distinguishing feature of this course is its continuity for the individual student, and its successful operation is confined almost wholly to very large cities.

On the whole, short unit courses will be found to be the more satisfactory, permitting, as they do, greater flexibility of instruction, better adaptation to individual needs, and a variety of combination that will more nearly meet each student's individual requirements.

The establishment of any school or class giving preparation for any trade raises the question of the relation of the institution to the trade as a training center.

Inasmuch as any plans for vocational secondary education in a town or city must adjust themselves to present-day conditions in the industries, it is necessary to consider not only the processes and demands of the trades and occupations upon the worker, but also the attitude of both employers and employees in the trades as to the kinds of training needed, the ways in which the training can best be given, and what arrangements the employers, employees, and the schools shall agree upon as to the following:

1. The conditions under which new workers are to be trained and received into the trade or occupation.
2. The credit toward the period of apprenticeship to be given any course of training in the schools either before or after employment.
3. The training in schools as well as shops to be required of the apprentice after employment.
4. The preference given to local and trained workers in hiring and promoting in the trade or occupation.

In order to guard against misunderstandings and in order to prevent future complications and difficulties, it will in many instances be necessary to prepare a written bill of particulars which determine somewhat in detail the conditions under which the three most interested parties are willing to cooperate in carrying on the work of vocational education.

These particulars may make provision for such questions as—

1. The length of the probation period during which the pupil shall be tested out for determining his fitness to go on and complete the training necessary for entrance to the trade which he has selected.
2. The wages to be paid—
   - (*a*) During the period of part-time training.
   - (*b*) At the entrance into the industry on full time.
   - (*c*) Graduated scale of increase in wages up to time of acceptance as a full-fledged journeyman.
3. Deferred presentation of the diploma for a period after leaving the school and entrance into the industry to be dependent upon proof of satisfactory work.
4. Preferential employment to be extended to those who have attended day or evening classes for training the worker in trade subjects.
5. Length of time and content to be covered by the instruction in the school.
6. Possibilities and arrangements for instruction during dull-season periods.
7. Arrangements to be made by the trades for encouraging attendance upon evening trade-extension classes.
8. Any other matters which may be pertinent to the local situation.

Chapter VI.

METHODS OF GATHERING DATA ABOUT INDUSTRY AND INDUSTRIAL WORKERS.

In the recent past we have had a large number of industrial surveys or investigations the purpose of which has been to reveal in a very definite way, and susceptible to interpretation in educational terms, the value of instruction for those who are to enter upon industrial careers, or for workers who have already entered the industries.

The determination of many of our large industrial communities to take an inventory of their natural resources (meaning their aristocracy of brains) has disclosed the fact that the stock we had believed inexhaustible is somewhat depleted. It is believed that in the past Providence has been kind to us, but in the future Providence is likely to leave us a little more to our own intelligence, and henceforth we must sell more brains and less material.

An immediate determination to pursue the policy of our most successful competitor for industrial and commercial supremacy appears to be agreed upon, and likewise that the same end must be attained by the same means—that is, by industrial education.

It is apparent that there is no limit to the possibilities of human helpfulness that could be realized by the establishment of properly equipped and managed industrial schools. They would become the medium of communication and the promoters of cooperation between the commercial and industrial world and the school.

It is easy to understand why it is not a good thing for a community to have large numbers of boys and girls seeking employment while a reasonable minimum of education is still unattained, or entering upon life careers still too young to be aware of their own possibilities.

Just now we have one of the recurrent periods where the world is filled with reform, generally of the most attractive kind, which aims at making some one other than ourselves virtuous by certain due processes. There is all about us a widespread desire to elevate the moral or material condition of others. At the present moment it is industrial efficiency. All such propositions we must welcome for purposes of study. We must look upon them with attention and examine them, not merely in the roseate glow of enthusiastic hope, but by the cold, clear light of the past, before we decide that they are fit for the ordeal of the future and will prove a benefit to mankind.

We must, to the utmost degree, develop our human efficiencies, but keep in mind always that social values are of greater importance than the productivity of units of trade. Devices for purposes of exploitation of the workers, reducing costs, and increasing output can not and will not be accepted as creators of social efficiency.

Vocational schools must undoubtedly yield, to a certain extent, to the demand for more specific preparation for the work of the world. On the other hand, it is equally certain that business and industry must yield to the demand for better adjustments to the physical, intellectual, and moral needs of the workers.

The chief difficulty in the recent past to the establishment of industrial schools has been (1) the lack of data regarding occupations and (2) the lack of that intimate relationship of cooperation between the shop and school so necessary to insure success. This intimacy of relationship must be permanently established and maintained if progressive efficiency is to be the goal.

Industrial education in any community, if it is to be efficient, must be at least as progressive as are the industries of that community, but the school authorities ought not to remain content to follow the industrial development of the community. Industrial education should not be content to follow, it should aim to direct industrial development. The data of industrial education include not only the data relating to the shops located in the community, and to the employments and processes of those shops, but include in addition data relating to the industry, data, that is to say, which are national and international in scope.

KIND OF FACTS TO BE GATHERED.

A systematic inquiry regarding occupations and processes in those industries which are established in the community, and with reference to which industrial courses in the public schools are organized, must be made in order that courses may be developed in conformity with the best practice in the industry.

The industrial character of a community is determined by a process of selective evolution. Indutries develop in any community in competition with other communities largely in proportion as the environment is favorable for development. This selective evolution may be a blind natural process, dependent upon unenlightened effort, or it may be the result of enlightened and directed effort. In either case the industrial character of the community will be unique and peculiar to that community. This does not, of course, mean that all of the occupations and industries of the community will differ materially from the occupations and industries of other communities. It means that the degree of development of each industry will be determined by local conditions. It will certainly be determined in part by accident. Industries may develop in a community by virtue of the momentum of development in the past. An industry happens to be initiated in a community, and, simply by virtue of the fact it has been established, it develops unless there are unfavorable local conditions.

The important consideration is that the degree of development of the industries established, as is the case in every large city, whether determined by accident or by natural economic conditions, is unique and peculiar. Since it is unique and peculiar, the educational needs of a community can not be determined in any other way than by a survey which is organized to determine for that community precisely what is its own peculiar industrial character, and especially to determine in what respect its industrial character differs from that of other communities. The final object, therefore, is to define precisely the industrial character, to emphasize especially the qualities of industrial conditions, and to provide a basis for making industrial eduaction in the community as unique and peculiar as is the industry itself.

PRESENT INDUSTRIAL INEFFICIENCY.

Our present processes are inefficient and wasteful, and we suffer great loss from incomplete production, due to want of skill. We pay little or no attention to the human element in industry, and much less to the experimentation for correct standards. Men are assigned to this machine or that machine, to one process or another, and left to toil without any well-defined notion of how the volume of their output will balance with the output of other men operating other machines or engaged in other processes. There is little information at hand to indicate whether individual workmen are efficient or whether they are performing their tasks by the shortest possible cuts. Training for industrial efficiency, if it is realized that the human element must be considered, will make of every worker grounded in the science of industrial processes an experimenter for improved methods. It offers an opportunity for research into industrial processes that will make every worker a research student, instead of a devitalized and deenergized automaton.

One purpose of industrial education should be to teach the best usage and practice, as well as processes in the industry; in a word, to teach the industry to the community as well as to the youth who are to enter the industry. When an industry is following obsolete methods the purpose of industrial education should be to be aggressive in establishing modern methods and the most approved shop practice, both as regards manufacturing processes, the organization of the working force, and the division of labor.

The present needs of industry, viewed from their economic aspects only, may be summarized in part as follows:

1. A greater investment of labor power and skill in the finished product.
2. A readjustment of relationship between employers and employees, which involves a cooperative effort by employers and employees for productive efficiency.
3. Relief of the workers from the deadening monotony of employment.
4. An educational system that will develop initiative, independence, imagination, and self-reliance.

AIM OF SURVEY.

The aim of any survey in part must be:

1. To prove the necessity of a knowledge of industrial and school conditions in the making of a program for industrial education in a municipality.
2. To show the kind of facts about industry and about the schools which need to be gathered.
3. To develop a proper method for studying the industries and the schools for the purposes of industrial education.
4. To give publicity to a knowledge of industrial and school facts and conditions which must be considered in the economic development of a permanent and constructive program of industrial education.

Since vocational education is a local issue, it must be adapted in its contents and method, as well as in its organization and administration, to the social, industrial, and educational conditions of the community.

Assuming that it is the business of the community to educate and equip for life all the youth of the city, it is also the business of the city to insure scientific guidance into useful vocations. It is just as important to assure the proper application of the training, through fitting the individual to the right occupation, as it is to provide the training itself. The public conscience is being awakened, and it will no longer do to leave boys and girls to the vicissitudes and moral dangers of chance employment, to the certain disappointment of a job without a future, or the handicap of exploitation by private enterprise. It is apparent that education and training, unsupplemented by opportunity for employment which assures the proper utilization of the training, is a tremendous economic waste.

SCOPE.

The scope of an industrial survey in order to be complete must include an analysis of the major portion of the mechanical and manufacturing industries, the building trades, transportation, heat, light, and power transmission.

METHODS.

A comprehensible survey must be the work of professionals, not of amateurs. It may be laid down as a fundamental principle that the successful achievement of any survey is conditional upon professional service. The preparation of schedules, the gathering of data, the tabulation work, and the final editing and organizing of the material for the report require professional service.

The work is of a special character, requiring a special sort of training and experience. Efficiency as a survey investigator is not primarily a matter of natural ability. It may be freely admitted that in any community there are connected with the public schools a sufficient number of men and women entirely competent, so far as regards natural ability to make a survey, but it is highly improbable that there should be available in any community a group of men and women possessed of the special training and experience required by survey work. In the nature of the case no community can maintain a group of survey experts, since no community has yet adopted the policy of making a survey at frequent intervals.

In this connection, however, it may be noted that something in the nature of a permanent survey organization should be maintained by every industrial community, and one purpose of every initial general survey should be to develop a local organization for the maintenance of a permanent survey.

The objects of such a permanent survey are obvious. They are: First, to extend investigations to industries not covered by the initial survey; second, to gather regularly each year, by a systematic inquiry, data regarding new processes and occupations instituted within those industries which are established in the community, and with reference to which industrial courses in the public schools are organized; third, to gather data regarding the development of new industries in the community; fourth, to maintain intimate relationship of cooperation between the shop and the school.

This intimacy of relationship can not be permanently established by one general survey made at any given time, or even by a succession of general surveys made at more or less infrequent intervals. It can be maintained only by a permanent local organization, which shall be constantly employed in gathering new data in the shop.

SCHEDULES.

The information concerning trade groups and occupations is secured through two types of schedules: (1) The establishment schedule and (2) the individual schedule.

(1) The establishment schedule, secured from employers, covers the following important points:

Products of the different establishments.
Busy and slack seasons in the industries.
Difficulties in securing competent workers in specific occupations, with reasons.
Period of minimum productivity in various occupations.
Years of experience necessary to reach minimum wage.
Probable increase and decrease in demand for workers.
Relative demand and supply for skilled and unskilled labor.
Frequency and line of promotion from occupation to occupation.
Shifting of workers from process to process to give wider experience and training.
Opportunities for untrained beginners in specific occupations.
Relative efficiency of foreign and domestic trained workers.
Relative instability of employment of trained and untrained workers.
Conditions affecting the welfare of the worker.
Character of instruction received by workers in the shops.
Relative advantage of indentured and unindentured apprenticeship.
Character of apprenticeship agreements.
Relation of general school training to efficiency.
Extent of the educational deficiencies of beginners.
Types of schools and kind of training necessary in the judgment of employers to increase the efficiency of workers.
Willingness of employers to cooperate in part-time schooling.
Kind of part-time schooling favored.
Practical tests used in determining the efficiency of applicants and workers.

The following "establishment schedule," used in the Richmond survey of 1914, illustrates more fully the scope of this type of schedule:

*Name of firm*________________________
*Date*___________________

VOCATIONAL SURVEY OF RICHMOND, VA.

[NOTE.—All information furnished in this questionnaire will be held strictly confidential and used only for the purpose of determining the kind of industrial education which will best meet the needs of persons engaged in the specified trades of Richmond, Va.]

[INSTRUCTIONS.—Please fill in all blanks and return as soon as possible to Charles H. Winslow, director vocational survey, Administration Building, 805 East Marshall Street. Where space for reply is insufficient, please give information on separate sheets by referring to the number of question answered.]

Name of person to whom future inquiries may be addressed: ____________________.

PART I.—*General information.*

1. What are your specialties? __________
2. Number of employees other than office help:
   (*a*) At present time __________
   (*b*) Maximum number in service in 1913 __________
   (*c*) Minimum number in service in 1913 __________

3. What is the slack season with you? From ---------- to ----------
4. What is the busy season with you? From ---------- to ----------
5. Is difficulty experienced in obtaining efficient journeymen workmen for permanent employment? ----------
   (a) Is so, in what occupations? ----------
   (b) Is this difficulty due to—
      (1) Lack of an apprenticeship system in the shop? ----------
      (2) Lack of opportunity to learn the trade in the shop? ----------
      (3) Other causes? (Specify.) ----------
6. What is the age period of maximum productivity for workers? (Indicate age at which the journeyman commonly begins to earn full wage, and age at which earning power begins to decline.)
   From age ---------- years, to age ---------- years. Are there exceptional occupations to which the age limits specified do not apply? If so, indicate the limits for these exceptional occupations. ----------
7. After how many years' experience as an apprentice and journeyman does a journeyman ordinarily earn his maximum wage? ----------
8. In what occupations is the demand for more workers likely to increase most rapidly during the next five years? ---------- (Explain why.) ----------
9. Is the supply of unskilled labor becoming greater or less, relatively to the demand for it? ---------- The supply of skilled labor? ---------- Why? ----------
10. Are promotions frequently made in your establishment from one occupation to another? ----------
11. What is the usual line of promotion for a journeyman? ----------
12. Are individual workmen frequently shifted from one process, or machine, or occupation to another? ----------
13. What trades can a boy learn in your shop thoroughly? ----------
14. Can untrained beginners be used? ---------- In what occupations can they be used? ----------
15. Is the foreign-trained worker a better workman? If so, why? (Is it, for example, due to superior natural ability, or to better training in school, or in shop?) ----------
   What are the deficiencies of the native Americans? ----------
16. Can you retain thoroughly trained efficient workmen permanently in your employ, or do you find it necessary to lay off such men at certain seasons? ----------

PART II.—*Conditions under which the work is performed.*

[In answering questions 17 to 24 specify in each case occupations and conditions.]

17. What conditions involve peculiar physical training? (Specify jobs and conditions.) ----------
18. What conditions involve peculiar nervous strain? (Specify jobs and conditions.) ----------
19. What conditions tend to impair health? (Specify jobs and conditions.) ----------
20. What conditions especially stimulate the intelligence of the workers? (Specify jobs and conditions.) ----------
21. What conditions, if any, narrow and restrict the mental development of the worker? (Specify jobs and conditions.) ----------
22. What conditions tend to kill out the worker's ambition and interest in his trade? (Specify jobs and conditions.) ----------

23. What conditions, if any, are to be guarded against as exerting morally unwholesome influences? (Specify jobs and conditions.) __________
24. What other conditions of work are important as affecting the welfare of the workers? (Specify jobs and conditions.) __________

PART III.—*How workers are trained.*

25. Does the worker receive any instruction or training in your establishment more than he can pick up on the job? ______ If so, who gives it to him? (Indicate nature of training.) __________
26. What occupations in your shop can be learned in the shop with little or no instruction? __________
27. What are the terms of any agreement of apprenticeship under which apprentices are now working in your shop? (If possible, provide copies of such agreements.) __________
28. Do you find that those who are apprenticed have a better attitude toward their work than those who are not? (Specify advantages and disadvantages of formal apprenticeship.) __________

PART IV.—*Relation of occupation to school training.*

29. In what ways have you found the industry hampered by a lack of elementary school education on the part of beginners? __________
    What knowledge that beginners should have is most frequently lacking? (Specify occupations and deficiencies in detail.) __________
30. In what occupations, if any, is general school training beyond the seventh grade of value in increasing efficiency as workers? __________
31. Assuming that school training beyond the seventh grade is an advantage, what subjects should be taught? __________
32. What kind of a school would most help workers in the various occupations during the apprenticeship period? __________
    Day schools __________
    Part-time day schools __________
    Night schools __________
    Other schools (specify) __________
    For which occupations do you believe that such schools could be provided to best advantage? __________
    In your opinion, what should be taught in such a school? __________
33. If a part-time day school were established, would you as an employer be willing to enter into an agreement providing for a definite period of attendance of apprentices at such a school for a definite number of hours each week, paying them the usual wage while in school? __________
34. For what occupations would you enter into such an agreement? __________
35. If a part-time day school were established, in your opinion how many hours per week should an apprentice attend? __________
36. In your opinion, what should the schools do for the worker before he enters the shop? (Consider what amount of general education the school should give, what amount of vocational or industrial training, etc., and in general what the schools should give that is needed in the shop but can not be acquired in the shop.) __________
37. What do you believe a night school should teach to help the journeyman who wants to advance in his trade? __________
38. What questions do you ask applicants for work? __________

39. What tests do you apply to determine fitness or efficiency of applicants? ----------
40. What records are kept in your shop to determine efficiency of workmen? ----------
41. How can the worker be given an interest in his work? Can you suggest a modification of conditions in the shop or in shop practice or in school training? ----------
42. Would you be willing to cooperate with the schools in an effort to organize shop practice so as to develop interest and efficiency on the part of the worker? ----------

(2) The individual schedules, obtained from the workers, cover such important points as:

Age distribution of apprentices and workers and the nativity of the workers, by trades.

The regular hours of daily and weekly labor, by trades.

Time lost by workers, by trades.

Causes of loss of time.

Extent of fluctuation of employment, by trades.

Extent of overtime worked, by trades.

Years of experience as wage earners of workers.

Years of experience in present occupation and in other occupations.

Age of entrance upon wage-earning occupations, by trades.

Period of apprenticeships served in years by workers in different trades.

Relation of years of experience to hourly wage.

Change of place of employment during apprenticeship, by trades, and reason for changing.

Extent to which workers receive proper instruction in the shop while learning the trade.

Highest, lowest, and average wages, by occupations within trades.

Locality in which workers learned trades.

Change of occupations of present workers, by trades.

Misfits in present position by trades as to natural ability, training, and experience.

Employees working under conditions causing strain or impairing health, through occupational disease.

Possibilities of learning different trades completely in the shop.

Age of leaving school of apprentices and workers.

Hourly and weekly wages of apprentices and workers, by trades.

The following, taken also from the Richmond Survey, illustrates the extent of the "individual schedule":

INDUSTRIAL SURVEY OF RICHMOND, VA.

INDIVIDUAL SCHEDULE.

[NOTE.—All information furnished on this card will be held strictly confidential and used only to determine what kind of industrial education will best meet the needs of persons engaged in the industries of Richmond.]

Name --------------------
1. Age ------ years.
2. Place of birth: (a) City ---------- (b) State ---------- (c) Country ----------

3. Occupation __________
4. Member of what union? __________
5. Name of employer __________
6. (a) Regular number of hours of labor per day (except Saturday)? ______ (b) On Saturday? ______ (c) Total per week? ______
7. (a) Wage per hour? ______ (b) Overtime wage per hour? ______ (c) Wage per week, not including overtime? ______

[Note.—Pieceworkers should give approximate estimate of earnings, and state "piece-work."]

8. How many weeks of work did you lose during the year ended June 1, 1914, through:

[Note.—Estimate number of weeks where you can not give exact number.]

(a) Sickness, ______ weeks. (b) Accident, ______ weeks. (c) Factory shut down, ______ weeks. (d) Temporarily laid off, ______ weeks. (e) ______ weeks. (f) Total time lost, ______ weeks.

9. If you were on part time during any portion of the year, how many weeks? ______ (b) How many weeks overtime? ______
10. How many years have you been in your present trade, including apprenticeship? ______ years.
11. How many years did you serve as an apprentice? ______ years.
12. At what age did you begin to learn your trade? ______
13. (a) Name of city in which you learned your trade? __________ (b) In how many shops were you employed during your apprenticeship? ______ (c) What were your reasons for changing your place of employment? ______
14. (a) Is your present occupation one for which you feel that your training, experience, and ability best fit you? ______ (b) If not, specify occupation for which you are better fitted __________
15. (a) If you had had opportunities for suitable training, do you feel that you would have been more successful in some other occupation? ______ (b) If so, in what occupation? __________
16. Does your work involve peculiar physical or nervous strain? ______ (Specify in detail the nature and consequences of such strain.) __________
17. Are there conditions of your work which tend to impair health? ______ (Specify in detail.) __________

18. Mention below the different occupations at which you have worked. (Specify names of occupations.)	Length of employment in occupation.	Occupations (continued).	Length of employment in occupation.
(a) Present occupation........	....	(g) Occupation before that....	....
(b) Occupation before that.....	....	(h) Occupation before that....	....
(c) Occupation before that.....	....	(i) Occupation before that....	....
(d) Occupation before that.....	....	(j) Occupation before that.....	....
(e) Occupation before that.....	....	(k) Occupation before that....	....
(f) Occupation before that.....	....	(l) Occupation before that....	....

19. Check (—) those qualities most essential to success in your trade:
    (a) Mental alertness. ______ (b) Special adaptability. ______ (c) Initiative. ______ (d) Accuracy. ______ (e) Patience. ______ (f) Strength. ______ (g) Endurance. ______ (h) Keenness of sight. ______ (i) Dexterity. ______ (j) ______
20. (a) While learning your trade did you receive proper help and instruction? ______ (b) What kind of help or instruction that you should have received was not given? (Specify any difficulties encountered by you in learning your trade.) ______

21. Can a boy learn your trade thoroughly in the shop? ------
22. At what age did you leave school? ------
23. What grade did you complete? ------
24. In what ways, if at all, have you found yourself hampered by a lack of knowledge or of school training? ------
25. Indicate below any school courses, including correspondence courses, taken since leaving school:

Name of school.	Kind of school.	Course taken.	Did you complete this course?	Who paid the tuition?	Cost.

26. Why did you take these courses? (Specify reasons for each course.) ------
27. Did this school work result in increase of wages? (State, if possible, amount of increase in wages due to this work.) ------
28. What other benefits did you receive from these courses? ------
29. In your opinion, what should the schools teach to help the worker before he begins to learn your trade? ------
30. What do you think a part-time school should teach a beginner during his apprenticeship? ------
31. What could an evening school teach to help you in your occupation? ------

TABULAR ANALYSES.

Tabular analyses of occupations or operations by industries or trade groups.—The purpose of this character of analysis is to present in brief summaries a description of each occupation or operation for immediate visualizations, which will show the characteristics of the occupations or operations in comparative form. Each such tabulation presents the analysis under two general heads—" Findings about occupations or operations in the industry " and " Findings about education for occupations or operations in the industry."

The method of gathering material for the above analyses is by visitation to shops and factories to study at first hand industrial processes and conditions and secure the schedule information. This method purposes also to explain to employers and employees the nature of the inquiry and to secure their cooperation. Each interview represents a personal conference (which is of a strictly confidential nature in so far as the individual is concerned) of about 20 minutes for the purpose of filling out the scheduled questions.

The following analysis of painting as used in the Richmond survey is an illustration of the "tabular analysis."

FINDINGS ABOUT THE TRADE.

PAINTING.

1. Process: Smoothing and cleaning new surfaces with sandpaper and duster; removing old finishes by burning and scraping, or with paint or varnish solvents. Where the surface is to be painted a priming coat is laid on, all imperfections in the surface filled with putty, and the final coats laid on, each being rubbed down. Where the surface is to be stained and varnished, the stain is applied, the pores of the wood filled, and the several coats of varnish flowed on and rubbed down. Other processes performed by the painter are graining, lettering, stenciling, gold lettering on glass, and calcimining.
2. Product or specialties: Inside and outside painting and decorating; sign, wagon, carriage, automobile, coach, implement, and furniture painting.
3. Importance of trade (number employed): Approximately 600.
4. Conditions of employment:
   (a) That involve physical or nervous strain: Close, long-continued application to fine work, such as coach painting, lettering, striping, and interior decorating.
   (b) That stimulate intelligence and interest: Inside painting and decorating, sign painting, lettering, and high-class finishing.
   (c) That narrow or restrict mental development: Rough outside work or constant exterior painting.
   (d) That are in other respects important as affecting the welfare of workers (i. e., liability to accident, occupational diseases): Danger from imperfect scaffold rigging; danger of lead poisoning from uncleanly habits and dry methods of sandpapering; chronic diseases are caused by the use of some quick-drying flat paints in poorly ventilated spaces.
5. Wages:
   Apprentices—
   (a) Beginning wage, $3 to $4 per week.
   (b) Second-year wage, $5 per week.
   (c) Third-year wage, $6 to $7 per week.
   (d) Fourth-year wage, $7 to $9 per week.
   Journeymen—
   (e) Minimum wage, $1.50 per day.
   (f) Maximum wage, $3 to $5 per day.
   (g) Union scale, $3 per day.
6. Hours of labor, regular per day; per week; on Saturday: 8 to 9 hours per day; 48 to 54 hours per week; 8 to 9 hours on Saturday.
7. Seasonal activity:
   (a) Busy season: March to December, inclusive.
   (b) Slack season: January and February.
   (c) Fluctuation in employment: Regulated somewhat by building activities, but men work on the average about 10 months in the year.
8. Extent to which the trade is organized: About one-tenth.
9. Entrance age: 16 to 18 years.
10. Years required to learn the trade: Four years.
11. Age of maximum productivity: 22 to 55 years.
12. Is the supply of labor adequate to meet the demand? (Cause of deficiency, if any): Supply adequate for present demand for medium-grade workers, but the supply of high-class workmen is not sufficient to meet the demand.

13. Is the demand for labor increasing or decreasing? Increasing, especially for efficient skilled workers.
14. What is the source of supply? Boys from the lower grammar grades and casual labor.

FINDINGS ABOUT EDUCATION FOR THE TRADE.

15. What does the worker need to properly equip him for the trade?
    - (a) General education: At least a complete grammar-school education.
    - (b) Trade and technical education: Instruction as to proper rigging of scaffolds; how to keep brushes clean; proper method of spreading colors; neatness in application of colors, especially on inside decorating and lettering; theory and history of the trade; color harmony and design; chemistry of colors and color mixing; mechanical and architectural drawing; sketching; estimating; hygiene of the trade.
    - (c) Manipulative skill: Dexterity in handling brushes in fine decorating and lettering.
    - (d) Other requirements; qualities essential; such as accuracy, etc.: Artistic sense in decorative work; accurate color sense in matching colors; special adaptability; initiative; accuracy; patience; endurance; keenness of sight.
16. What the industry gives—
    - (a) Conditions of apprenticeship: Apprenticeship period of four years.
    - (b) Provision made in shops for systematic instruction of apprentices: None.
    - (c) Trade and technical knowledge: Only enough trade knowledge to equip worker for immediate productivity.
    - (d) Manipulative skill: Dexterity in handling brush.
    - (e) Extent to which trade can be learned in the shop: The trade knowledge required to make the labor productive can be acquired in practice, but very little of the technical knowledge or of the hygiene of the occupation can be so gained.
    - (f) Provision made in shops for systematic instruction of journeymen: None.
    - (g) Line of promotion: Apprentice, journeyman, foreman, contractor, employer.
17. Common deficiencies of workers: Deficiency in general education, technical knowledge, and knowledge of hygiene of the trade.
18. I. What the school ought to give the worker before entering the shop: Complete grammar-school education; prevocational courses in free-hand drawing; courses in color harmony and design.
    - II. What the school ought to give the worker after entering the shop—
        - (a) Trade and technical knowledge: Specialized courses covering specific trade and technical requirements of painting.
        - (b) Manipulative skill: The school should provide opportunity for acquiring manipulative skill in special lines of work, such as lettering.
    - III. Nature of part-time courses needed: Hygiene of the trade; chemistry of trade; color harmony; design; reading of blue prints; mechanical, architectural, and free-hand drawing; estimating.
    - IV. Nature of evening-school courses needed: Same as III for apprentices. Advanced special trade courses for journeymen.

DESCRIPTIVE ANALYSES.

Descriptive analyses of occupations, a description of each of the occupations within a trade group, or a description of the operations in productive processes is then prepared, which explains these processes and should include the physical, hygienic, and economic conditions of the work, the requirements upon the workers, and the kind of schooling required.

TYPE ANALYSES FROM THE RICHMOND SURVEY.

PAINTING.

Processes.—The painter performs a variety of operations, some of which are only indirectly or remotely related to the work of laying on coats of oil paint, varnish, water color, stain, or kalsomine. These operations may be characterized briefly as follows: Preparation of wood, plaster, and metal surfaces to receive the finishing coats; removal of old finishes; preparation and mixing of spirit or oil vehicles, and lead, zinc, and color pigments; rubbing down coats; and in certain classes of work, graining, laying gold leaf, gilding, lettering, free-hand drawing, stenciling, rigging scaffolds, and setting glass with putty or moldings in windows, doors, and skylights constructed of wood, metal or stone. These processes, which must be performed under a variety of conditions—in the paint shop, in manufacturing plants of miscellaneous character, or on the outside or inside of dwellings or other buildings—can best be considered with reference to each of the several classes of work which the all-round painter must be prepared to undertake.

House painting.—House painters may be divided into two classes, namely, brush hands, who do only rough outside work, and whose only trade qualification is ability to cover extensive surfaces; and skilled artisans, who understand the mixing of paints and can do any sort of inside or outside work.

The first step in house painting, as in other painting, is preparation of the surface to be covered. In new work this consists in cleaning and smoothing the surface with sandpaper and duster. In old work the first step is removal of old finishing coats of paint or varnish, which is commonly done by burning with a Bunsen burner and scraping, or by applying paint or varnish solvents and scraping. Surfaces from which old finishes have been removed must then be sandpapered until perfectly smooth. When the wood has been laid bare, smoothed, and cleaned it is ready for the priming coat of white lead, ocher, or other pigments mixed with linseed oil to the proper consistency. The color is selected for the priming coat with reference to the color of the coats that are to follow.

The priming coat is worked well into cracks and nail holes to protect these broken surfaces and is allowed to dry, after which cracks and holes are filled with putty, which adheres well to the paint. Two or more coats of the required color are now applied, the number and composition of the final coats depending upon the class of work.

A detailed description of several processes undertaken in various fields of painting follows the general description of house painting. These processes are known to the trade as *staining*, *filling*, *varnishing*, *kalsomining*, *sign painting*, *gold lettering on glass*, and *graining*.

These are in turn followed by a description of the specific problem in painting, that of *railroad car painting*. While it is recognized that this particular description may not fit conditions in other communities, it is given emphasis here for the purpose of showing the necessity of detailed description of processes if the industry is to be properly studied for the purpose of finding out what types of vocational education are needed in connection with a given industry:

Railroad car painting.—In Richmond railway car painting constitutes a branch of the trade of sufficient importance to warrant separate treatment.

Car painting is classified under two distinct heads, i. e., passenger car and freight car painting. Passenger car painting is a very high grade of work, requiring much experience and skill in all the processes of painting, varnishing, and finishing, while freight car work can be done by any ordinary painter, since no special skill is required for this work of painting of freight car bodies and trucks.

Passenger-car painting may be subdivided as follows: Exterior painting of new cars, interior finishing, and refinishing of old cars.

New cars when brought into the shop are first rubbed down with coarse and then with fine sandpaper. After this is done the wood filler is applied, the filler being a pigment mixed with oil and turpentine to the consistency of a thick cream.

After the coat of filler come three coats of body color, each one being rubbed down with pumice stone and water. The exterior decorations, such as lettering and striping, are then applied and the entire car revarnished.

In interior finishing the new interior woodwork is rubbed down with sandpaper and a coat of clear shellac applied. This forms a foundation for the three coats of varnish which follow. The interior varnish coats are each smoothed by rubbing with pulverized pumice stone and water.

The first process in refinishing old cars is the removal of all old paint by heating it with the flames from a Bunsen burner, gasoline being mostly used for this purpose. This having been done, the entire car is rescraped, scrubbed down with water, and sandpapered. Wood filler is not applied to old work, as the pores of the wood are already filled. Each body coat is rubbed down with pumice and water and the decorations and varnish applied, as in the case of new cars.

It requires about six days to paint a car completely, much of this time being, of course, consumed in allowing the several coats of paint and varnish to dry.

All window and door glass is put in in the car shop, although this work does not come directly under the supervision of the foreman of the paint shop and is not done by the car painters.

With the introduction of steel cars by railway companies a new method of applying paint has been found. This method consists of spraying paint upon the surface with a spraying machine. At the present writing this method has not been introduced in Richmond, all of the paint being applied by hand.

The steel-car painting done in Richmond is all repainting and refinishing. The car is given five or six coats of a body color, each coat being rubbed down with pumice and then decorated and varnished.

Freight car and truck painting requires no special comment, as this is the most common form of painting done in the car shop and does not differ from other rough painting.

Product or specialties.—The work of the painter in Richmond is not materially different from that done by painters in other communities, although railway car painting may be designed as a line of work employing a considerable number of men. In general the work of the trade embraces inside and outside painting of buildings; decorating; sign painting; painting of wagons, carriages, automobiles, steam and street railway coaches; painting of bridges, tanks and structural ironwork, of agricultural implements, and of furniture.

Importance of the trade.—According to the Federal census of 1910 there were in Richmond in that year 543 painters, glaziers, and varnishers, of whom 447 were employed in the building trades and 96 in factories. Of the painters in the buildings trades, 421 were white and 26 were colored. The number of painters in the city at the present time is estimated to be approximately 600.

Conditions of employment.—The work of the painter is not generally such as involves any peculiar physical or nervous strain beyond that involved in any sort of manual labor. Moreover, the work of the all-round well-trained painter is sufficiently varied to stimulate interest, much of it requiring the exercise of high-grade skill and of artistic sense. In some Richmond shops, however, the work is to a very considerable extent specialized, one man doing the rough work of burning and scraping off old finish, sandpapering and putting on body coats, another filling, staining, and varnishing, and another striping and lettering. In house painting, also, one set of men may be employed entirely on rough work. For the relatively unskilled men who are kept on the rough work there is comparatively little in the occupation that is stimulative, although there is in some cases a chance of promotion to the finer work of inside painting and decorating, sign painting, lettering, and finishing. In some classes of work there is danger of accident from imperfect construction or rigging of scaffolds.

Hygiene of the occupation.—The condition of employment which most seriously involves the welfare of the painter is that which exposes him to the danger of poisoning. It has been scientifically demonstrated that many of the materials with which the painter works are poisonous, and it is true that many of the processes are such that it is difficult, especially under certain conditions, to avoid infection. There are, however, certain simple precautions by which much of the danger can be avoided. A brief summary of the findings of scientific investigations and of the present survey as regards the hygiene of the trade follows. In general it may be said that the returns on the schedules of the survey, and the information gathered in personal conferences with painters, are entirely consistent with the findings of scientific research as regards the injurious effects which follow the use of certain materials, and which result from carelessness or improper procedure in various lines of work.[1]

Either or both the pigment and the vehicle of paint may be poisonous and either or both may be perfectly harmless. The higher-priced paint usually contains white lead, linseed oil, and turpentine. Both the white lead and the turpentine are poisonous. The pigment in cheap paint may be something perfectly harmless, as chalk or barytes, while the vehicle may contain so great a percentage of petroleum compounds that it is extremely poisonous, especially when used on inside work in inclosures poorly ventilated.

The pigments which cause poisoning are the lead salts, white lead, or basic carbonate of lead, sublimed white lead or basic lead sulphate, chrome yellow or yellow chromate, chrome green (a mixture of chrome yellow with Prussian blue), red lead, and orange mineral. Lead carbonate and lead sulphate are used in the higher-priced paints, usually separately, but sometimes together, and the carbonate much more commonly than the sulphate. Chrome yellow is used for tinting in house painting and in coach painting; chrome green for painting window shutters; red lead in painting structural ironwork; and orange mineral for painting wagons.

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[1] As regards the nature and physiological effects of paint and varnish poisons the following text is largely summarized from Bulletin No. 120, U. S. Dept. of Labor, by A. J. Carlson and A. Woeful.

Of these constituents lead carbonate is considered the most poisonous; but when sandpapering, mixing, or chipping off old paint, the red lead is the most dangerous, because it is lighter and floats in the air more easily. Chrome yellow is considered to be about as harmful as the red lead. Lead sulphate is not as dangerous as the lead carbonate, red lead, or the chrome yellow. It has been determined by scientific experiment that in human gastric juice the lead carbonate is a little more than twice as soluble as the sulphate; that the lead carbonate is distinctly more toxic than the sulphate; that both produce acute lead poisoning.

Experiments conducted to determine the effect which milk, when combined with the gastric juice, has upon the amount of lead dissolved brought the conclusion that when the milk and gastric juice are in equal proportion the hydrochloric acid of the gastric juice is so completely fixed by the milk proteins, or neutralized by the carbonates in the milk, that the mixture has virtually no solvent action on the lead salts.

On the basis of scientific investigations three practical suggestions have been made for safeguarding painters against poisoning: (1) That since lead carbonate is so much more toxic than the lead sulphate, lead workers as well as the State shall aim at the elimination of the use of the carbonate in all the industries where this is possible; (2) that since basic lead sulphate, or sublimed lead is poisonous, none of the precautions usually advocated for the protection of workers in lead be neglected by those handling lead sulphate; (3) that, in addition to taking other important prophylactic measures, workers in lead salts should drink a glass of milk between meals (say at 10 a. m. and 4 p. m.) in order to diminish the chances that the lead they have swallowed be dissolved by free hydrochloric acid of the gastric juice, as in some persons there is considerable secretion of gastric juice in the empty stomach.

Dust from the sandpapering of lead-painted surfaces is one of the most important causes of lead poisoning. The dust thus raised is inhaled and lodges on the nasal and pharyngeal mucous membrane and is then swallowed. Investigation has shown that the great bulk of this dust finds its way into the stomach and not to the lungs. This causes the poisoning of the workman, as the lead in the dust is dissolved by the free hydrochloric acid in the gastric juice and is easily absorbed. This dust is dangerous not only to the man doing the sandpapering, but also to the others working near. The danger can be entirely eliminated by the use of pumice stone and water in rubbing down coats, or, if it is a first coat where this is apt to raise the grain or on metal where it may cause rust, by moistening the sandpaper with some cheap mineral oil. Sandpaper so oiled lasts as well as when used dry, and the results so far as the work is concerned are as good when oiled paper is used as in dry sandpapering.

When metal surfaces are to be repainted they are usually chipped clean, and often the work is done by a machine using compressed air. This work is very dangerous, and a much better way, whether on wood or metal, is to burn the paint, causing it to curl and shrivel up, after which it can be easily scraped off. Some authorities speak of lead poisoning being acquired by the use of the burning method; but this is not apt to happen unless the painter should hold the flame long in one place and thus cause considerable smoke which might carry mechanically small particles of lead. The boiling point of lead is so high that the danger from evaporation from the heating required is very slight. Danger of poisoning from this method arises, however, when the burned paint is allowed to lie upon the floor of the shop until ground to dust. This dust is stirred up by the feet of the workmen or by moving materials, and is constantly inhaled and swallowed by the workmen. The scraps of paint should in every instance be cleaned up before they become dry.

The painter should be extremely careful in handling his food or tobacco and should avoid wearing dusty and paint-soaked clothing.

The dangerous vehicles are turpentine, benzine, naphtha, benzol, wood alcohol, and amyl acetate. Turpentine used as a dryer and for thinning is a constituent of many paints and varnishes. It sometimes makes up the entire vehicle. The inhaling of much turpentine-laden air causes headache, dizziness, and irritation of the throat and of the urinary system. If the workman is exposed for long periods to turpentine fumes, it often causes chronic inflammation of the bladder and kidneys. These fumes cause also inflammation of the skin and often affect the nervous system, as is evident in the typical symptoms of staggering and in extreme cases loss of consciousness.

Benzine and naphtha are used in hard oils as driers and very often constitute a large percentage of the vehicle in cheap quick-drying paints. Fumes from these liquids affect the nervous system much as does alcohol, causing staggering, defects of memory, and disturbance of sight and of hearing. Where the workman is long exposed to these fumes, chronic poisoning takes place, causing skin diseases, weakness, nervousness, and sometimes even impaired mentality.

Benzol is used in priming and as a paint and varnish remover because of its penetrating and solvent qualities. The benzol fumes are very dangerous and may be fatal. They cause changes in the blood, hemorrhages of the organs and mucous membranes, and degeneration of the organs. The symptoms of this poisoning are a flushed face, dizziness, and headache, followed by a blue appearance of the skin, nervous excitement, or stupor accompanied by sickness. If the poisoning is chronic, ulcers appear on the gums and lips.

Wood-alcohol poisoning comes mostly from inhaling the fumes while using varnish. This causes headache, hoarseness, twitching of the muscles, weak heart, unconsciousness, and temporary or permanent impairment of sight even to the point of complete blindness.

Amyl acetate, derived from fusel oil and acetic acid, is used in varnishes, gilding fluids, and as a paint solvent. The fumes cause headache, uncertain movements, difficulty in breathing, sleepiness, bad heart action, and poor digestion.

Poisoning from the various paint vehicles may be avoided in most cases by insuring good ventilation, either natural or artificial, of shops or rooms where work is being done. When this is not possible, the men should be changed as often as possible on work, so that no one of them will become enough poisoned for permanent injury.

Although the vehicles in the various leadless paints are usually much more poisonous than those used in lead paint, the introduction of these paints into the industry is a great help toward the betterment of hygienic conditions in the trade, as it is much easier to avoid poisoning from the vehicle than it is from the various lead pigments in the paint.

It may be noted that the paints used in railway-car painting are almost entirely the new leadless or almost leadless kind. The smoothing of all paint surfaces is done either by the use of pumice stone and water or with oiled emery cloth or sandpaper. All paint is removed by burning and scraping, and the work is done in large open buildings, where the ventilation is such that there is very little, if any, danger from the volatile substances in the paint. Railway-car painting in Richmond is therefore to a very large extent free from the dangers of poisoning above cited.

Economic conditions.—House and sign painters are to a very considerable extent free lances, working first for one contractor and then for another, or independently on their own account. The character of the work done by them varies greatly from job to job, and partly because of the miscellaneous character of their work and partly because of the nature of the climate in Richmond employment is not markedly seasonal. The slack season is from the 1st of January to the end of February, and the men are employed on the average about 10 months during the year. The sign painter, when weather does not permit outside work, usually has on hand work which can be done in the shop. As regards painters in the car shops and in manufacturing plants, employment is generally steady, and the seasonal fluctuations inconsiderable. Hours of labor range from 8 to 9 hours per day, or 48 to 54 hours per week, full time being worked on Saturdays. Skilled journeymen earn $3 per day, the minimum wage for unskilled labor being $1.50. Wages are low as compared with wages paid in other trades. The trade is about 10 per cent organized.

Age period of productivity.—Boys enter the trade between the ages of 16 and 18 years, and serve a four years' apprenticeship. The age period designated as the period of maximum productivity is from 22 to 55 years.

Demand for labor.—House painting is a field in which the demand for labor is increasing, but the occupation is, nevertheless, somewhat overcrowded, especially with semiskilled workers. The demand for sign painters is increasing, and there is a scarcity of skilled high-grade workmen. In the car shops and in manufacturing plants the demand for labor is fairly stationary. In general, the supply of medium-grade labor seems adequate for the present demand; the supply of high-grade labor is insufficient to meet the increasing demand in special lines. Workers are recruited from the lower grammar grades and from casual labor.

Educational trade and technical requirements.—In the way of general education the occupation of the painter makes no special demand upon the worker beyond that degree of general education required for all workers to insure to them advancement in proportion as they acquire in practice trade and technical excellence.

The trade and technical knowledge required by the skilled artisan is, however, very considerable. The nature of this knowledge will be apparent from the foregoing account of the processes and hygiene of the occupation. Some trade knowledge pertains even to the simplest processes, as, for example, to the process of rubbing down surfaces, where sandpaper of a proper grade of fineness must be selected, or some other material, such as ground pumice stone, rotten stone, fine steel wool, or curled hair. The painter must know which of the many varieties of fillers, sizes, or foundations should be used on woods of different qualities and in different classes of work. He must know something of the preservative qualities of different finishes. He must know how to mix oils, pigments, and varnishes for body coats, for flat and for glass finishes, for inside and for outside work. In all color work he must have a knowledge of color mixing and harmony.

The degree of manipulative skill required by the painter varies from the small amount required to lay on rough body coats to the very considerable amount required for flowing on varnishes, and for the fine work of striping, lettering, and decorating. The characteristic tool of the painter is the brush, which varies from the small round pencils and sash tools of camel's hair to the large round or flat brushes of hog bristles. In the handling of these tools a very high degree of manipulative skill is required for certain classes of work. In all classes of work the skilled hand economizes time, labor, and material.

In addition to the above qualifications, the painter should possess an accurate color sense, an artistic sense, which will enable him to harmonize colors in inside decorating, and to do original work in designing; a knowledge of alphabets for lettering, and a natural talent and skill in freehand drawing. Finally, it is vitally important that the painter shall have a thorough knowledge of the hygiene of his occupation.

What the industry gives.—The workers in the skilled class enter the trade through an apprenticeship, usually of four years. During these four years the apprentice is occupied as follows. In the first year he helps by running errands and cleaning brushes, and picks up such information as he can from observing the workmen; he learns to mix paints and to rig scaffolds; he does inside and outside painting, and learns to remove stains by the use of lime and acids. In his second year the apprentice is put on the scaffold and works with the journeymen putting on finishing coats; he learns how to remove old finish by burning and scraping, or by the use of solvents, and how to prepare work for new finish. In his third year the apprentice is put on inside work, such as graining and varnishing, and is in general allowed to do such work as he is able to do. During his fourth year he is given such work as he has not already done, and by constant practice becomes more proficient in all lines of work. This apprenticeship gives the boy a small amount of trade knowledge and enables him to acquire a fair degree of manipulative skill.

No provision is made in the shops for systematic instruction either of apprentices or of journeymen. The line of promotion is from apprentice to journeymen, and from journeymen to foremen. The skilled painter may go into business on his own account.

Deficiencies of workman.—The deficiency most commonly acknowledged by the painters is deficiency in the general education which they believe to be a condition of advancement in their trade. Nearly all painters have a very inadequate knowledge of the hygiene of their occupation. Few possess the trade knowledge necessary for estimating costs and qualities of material, and few possess an adequate knowledge of the principles of color mixing, color harmony, or design.

What the school ought to give.—Before entering the shop the painter should have received in the public school a complete elementary general education and prevocational training in drawing, design, and color harmony.

A serious obligation rests upon the school, as regards instruction of apprentices and journeymen in the shops. This obligation arises from the fact that a thorough knowledge of the hygiene of the occupation is absolutely essential as a safeguard against poisoning. Such instruction, it would seem, should take precedence over every other sort of continuation work. Assuming, however, that this instruction is given, the school may properly undertake to give instruction organized with reference to the technical requirements of the painter by offering courses covering freehand drawing, lettering, design, color harmony, composition of paints, varnishes and other materials, and modern practice in special lines of work.

These courses may be grouped under the following heads (see also outline of course for painters):

1. Trade hygiene: Diseases and dangers of the trade.
2. Art: Color harmony, freehand drawing, and design.
3. Chemistry: Chemistry of color pigments.
4. Mathematics: Estimating.
5. Business practice: Methods of doing business; bookkeeping.

Chapter VII.

RELATION BETWEEN VOCATIONAL EDUCATION AND VOCATIONAL GUIDANCE.

The most fruitful field of vocational guidance, like that of vocational education, is the public school. Vocational help will always be needed for young people outside of the schools, and for older persons who have not found themselves in life work; yet the best service can be rendered in the plastic years of school life, when courses of study and school influences may be made to contribute to the real preparation of the young person for a vocation.

Before discussing at length the place of guidance and its relation to vocational training, we may speak of the needs and conditions which have within half a decade produced the vocational guidance movement.

The age which has made a watchword of the term "efficiency" is peculiarly sensitive to all forms of waste. It calls for such training as shall eliminate waste. The conservation of our natural resources is simply another phase of the antiwaste, or efficiency movement. There is, likewise, a movement spreading through the country which looks more closely to the conservation of our human resources. This movement finds its expression in vocational guidance and vocational education, which are, in a large sense, inseparable.

While the movement for vocational education has been conspicuously advocated from the side of industry, the vocational guidance movement has been distinctively the product of present-day social service. Both movements in their present developments and in their future activities belong to the socially minded educator, philanthropic worker, and employer.

Drifting from school to work, and from job to job, is now clearly regarded as a very costly kind of human waste. Working in undeveloping employments means a waste of time and energy to the worker and a loss to society. To stop this waste and to encourage each boy and girl to plan and make the most of life are the chief aims of the vocational movement.

There is a human waste due not only to poverty, ignorance, and lack of opportunity, but due also to misdirection of effort. Let us consider for a moment the relation of our topic to the urgent matter of unemployment.

The causes of unemployment are divisible into two general classes, impersonal or economic, and personal. Although the latter group of causes is doubtless the less important, there seems to be quite often a commingling of both the personal and the impersonal causes; and in the judgments of the individuals affected, both the employer and the employee, the personal elements loom large. It is with these personal causes that the remedial agencies deal, and it is to these personal causes that the vocational movements are, for the present at least, largely directed.

Excluding abnormal conditions of industry, the selective influence of personal qualifications operates continuously. These personal elements under modern conditions are not only the conventional industrial virtues like steadiness, temperance, and application, but the subtler, yet equally potent, factors, such as intrinsic fitness, a life-career motive, and a life-career plan. To the student of vocational guidance these last are highly important elements not only as bearing on the incidence of unemployment, but also as affecting the economic career as a whole.

The overcrowding of the traditional occupations, such as law, medicine, and the clerical pursuits, shows what little effort society makes to direct talent into its possibly most appropriate opportunities. Communities obviously should organize such incentives and guidance as will awaken interest in other occupations just as commendable and perhaps more promising than those into which the majority of our young people drift.

Through extension of vocational training opportunities, then, and especially through the provision for prevocational schools, which, when their purposes are better understood, will become self-discovery schools, and as such afford young people and their teachers a most important basis for vocational guidance, the schools are beginning to deal with the task suggested.

Vocational service endeavors to help pupils to self-knowledge, and to reconstruct school programs in order that they may more sensitively minister to the self-discovery and economic needs of different pupils. Vocational service is an instrument for talent saving. In its larger relationships, however, vocational service is only one phase of the social organization of school and vocation. It introduces into education the idea of fitness of the individual, apart from class or group; it introduces into employment the idea of fitness of the task, and appraises the occupations in terms of career values as well as social worth.

There are three directions in which vocational guidance and training provision for the young person already at work must be made: First, to enable the boy and girl to advance in their present employment; second, to prepare them for a change to something more desirable, whether related to the present employment or not; and, third, to stimulate their general development as citizens, homemakers, and social beings.

There will be in the coming years a large increase not only of vocational schools, as such, for the homemaking, professional, agricultural, and commercial employments, but also a large variety of experiments in trade instruction of boys and girls and special groups of young people, some of whom can afford only a limited time.

Comprehensive vocational assistance, through specially trained teachers and others, is now recognized as a proper part of the new machinery of service, service which should begin in the elementary grades and continue, at least, to the period of young manhood and womanhood. This seems to be the conviction of thoughtful educators everywhere.

The old vocational influences have disappeared. Ages less sensitive to childhood's rights than ours, the Middle Ages at all events, saw that the prosperity of the craft as well as of the craftsman depended on rigorous direction and training during the plastic years, and an apprenticeship system resulted which the world will probably not see again. The employer was the teacher, the shop the trade school, and a legal responsibility rested on the employer for the right upbringing and the health and eventual efficiency of the apprentice. Not only was industry, so far as it was organized and monopolized by the craft guilds, thoroughly educative, but the home with its household manufactures, the father's shop, the mother's kitchen, and the simple economic environment, all tended to serve as potent directive and vocationally educative influence.

This condition is gone forever. Much of our schooling at best is devoted to abstract preparation for life, instead of treating the child as if living and now in life. Social control and democratic education are the forces which now must do the work of those vanished vocational forces as yet unreplaced in the preparation of youth for life.

Out of such needs in the fields of education and employment the Vocation Bureau of Boston, as an illustration, has developed the following general aims:

1. To study the causes of the waste which attends the passing of unguided and untrained young people from school to work and to assist in experiments to prevent this waste.

2. To help parents, teachers, children, and others in the problems of thoughtful choosing, preparing for and advancing in a chosen life work.

3. To work out programs of cooperation between the schools and the occupations for the purpose of enabling both to make a more socially profitable use of human capacities and opportunities.
4. To publish vocational studies from the viewpoint of their educational and other efficiency requirements, and of their career-building possibilities.
5. To conduct a training course for qualified men and women who desire to prepare themselves for vocational-guidance service in the public-school system, philanthropic institutions, and in business establishments.
6. To maintain a clearing house of information and investigation dealing with life-career problems.

The public school, as already suggested, is the logical starting point for the work of vocational guidance. Here the child is under daily observation, and the problems of the family make themselves known in countless ways. Just as we have added to the school service the nurse, the physician, the play supervisor, and other agencies of enlightened modern demand, we need to supplement the teacher's insight into the character and attainments of the pupil by the practical cooperation of a vocational counselor in touch with the demands, the conditions, and the opportunities of the world of work, in touch with the intimate details of the families in a particular school neighborhood, and working hand in hand with the teacher, the parent, and later with the employer in making the best investment of the boy's training and possibilities.

Vocational guidance must cooperate with vocational education through the natural channels of approach. These are: The school authorities, the teachers, the parents and advisers of youth, the employers of labor, and public opinion.

Through school authorities.—As a beginning there may be need of a privately supported vocational-guidance bureau to work with the school boards and school officers of a town or city, as the Vocation Bureau of Boston has cooperated for five years with the Boston school authorities.

The vocation bureau entered into a definite agreement with the Boston school committee to establish vocational guidance in the schools of the city. A committee of six masters was appointed to promote cooperation. A system of vocational-record cards was established for elementary and high schools. This system showed the parents' plan for the pupil, the especial ability of the pupil in some line, his physique, and finally his own plan of life, whether to enter a trade, profession, or business. Teaching thus became more personal, and consequently more helpful from the vocational standpoint to the individual boy or girl.

Along with this card system, meetings of teachers were held for the study of vocational conditions and questions, and addresses were given by people of special fitness before schools and parents' associations.

One of the principal provisions in the arrangements between the school committee and the vocation bureau was for a group of teachers to be known as vocational counselors, to be appointed by their respective principals and to represent every school in Boston. Over 100 teachers were so appointed, and they have been meeting throughout each school year to consider the educational opportunities of the city, the vocational problems of the children, and to confer with employers and others who have been invited to the sessions. The number is now over 200.

The work of the vocational counselors has been a labor of love. Nobody has expected that attending occupational talks would alone equip for effective vocational guidance. Highly important results, however, have come out of these meetings.

In the first place, every school in the city has had one teacher—indeed, in some schools committees of teachers have formed voluntarily—to give time and thought to the dropping out from the grades of many boys and girls. These teachers are personally studying the home, street, and other influences which steady or unsettle the children when the compulsory education laws no longer restrain; they are trying to discover what assistance a school can give to parent and child perplexed with the problems of a life career.

There is plentiful testimony showing that fathers and mothers now turn to the Boston schools as never before for advice and help concerning their children's future. Questions as to what high schools or vocational schools and what courses to choose are continually coming before the counselors. The abilities, the interests, faults, and promising tendencies in the children are topics of grave discussion between parent and teacher or principal, the viewpoint being not only that of present school requirements, but also that of the probable careers of the children. In the classrooms the occupational talks have been repeated in order to make clear the efficiency requirements of the practical world outside. School programs, and even commencement-day programs, have begun to show how schools are facing the challenging world which is soon to claim the productive years of these children.

This awakened practical interest of the schools in the life work of the children can not stop short of comprehensive supervision and protection of the after-school careers of boys and girls. Already teachers, on their own initiative and with an expenditure of much time and energy, have gone into the homes of their pupils, and have sought to get first-hand knowledge of the industrial environments. If our schools are to have any guiding relation to life, and all educational reform clamors for this relation, teachers must be given every incentive to touch in such personal ways the realities of the life which their pupils will live.

It should be pointed out here that the creation of this large body of vocational counselors was intended to afford a foundation for the more specialized and technical requirements of genuine vocational guidance. In 1912 the school board detached, at the suggestion of the vocation bureau, three capable counselors to make investigations which should prepare the way for more effective vocational guidance work in the Boston schools.

After the vocation bureau had conducted this work for two and one-half years, the school board early in 1913 voted to establish a vocational guidance department. The number of school vocational counselors was increased to over 200. The plans formulated and carried on under the personal direction of an assistant superintendent are in some of their interesting details as follows:

SUPERINTENDENT'S CIRCULAR NO. 10, 1913.

To the Principals of Schools and Districts:

In order to make the work in vocational counseling uniform, it seems desirable to have the counselors all over the city chosen as follows:

Two from each elementary school building containing a graduating class;
One from each building containing grades above the fourth but below the eighth;
Two from each high school.

The plan which will be outlined later will consist of (1) work with the graduates and (2) with those who drop out before the graduation; hence it will be wise to have the counselor who is to deal with the graduates an eighth-grade teacher, while the other counselors may be teachers of lower grades.

Realizing the high character of service which has been given by the present group of vocational counselors, it is hoped that so far as possible they may be retained, and that in choosing additional counselors the principals will bear in mind the fact that it is essential to the success of our undertaking to have only those who are keenly interested and willing to give of their time and strength. Aside from the counselors, all principals are urged to attend the meetings whenever possible and to cooperate in every way possible.

Through school teachers.—Vocational guidance has its greatest opportunity to serve vocational education through the proper training and equipment of teachers and school vocational counselors. The course given by the vocation bureau to the Boston teacher counselors has been developed through these several years into a university course on vocational guidance. It was given in the Harvard University summer school in 1911, 1912, and 1913; in the University of California and the State Teachers' College, at Greeley, Colo., in 1914 and 1915; and now in Boston University and Teachers' College, Columbia University. Some of the time a class has been conducted in the offices of the bureau.

In these courses many teachers, vocational counselors, and civic and social workers have received suggestions intended to help them advise youth. Gradually the vocational counselor will have less teaching and more professional counseling to do.

OUTLINE OF COURSE ON VOCATIONAL GUIDANCE AT BOSTON UNIVERSITY.

1. The Need of Vocational Guidance.
    - Discussion of investigations of the problem.
    - Local experiences.
    - Federal report.
    - The dropping out from school.
    - Problems and discussion.
    - English reports.
2. Methods of Investigation.
    - Needs.
    - Details of a typical study.
    - Analysis of "necessity" as a cause for leaving school.
    - Standard authorities.
    - Problem of school and college education.
    - Problems and discussion.
3. The Scope of Vocational Guidance.
    - Tentative definition.
    - Description of main issues.
    - Analysis of terms.
    - Discussion of various definitions.
    - Beginnings in vocational guidance.
    - Problems and discussion.
    - Reading of class papers.
4. The Start in Life.
    - Entrance into a trade.
    - English apprenticeship, etc.
    - Present-day industry.
    - Material for vocational guidance.
    - Problems and discussion.
5. Occupational Study.
    - Outline of method.
    - Addresses by employers, etc.
6. Classification of occupations.
    - Analysis of demands and qualifications.
    - Addresses by employer, etc.
7. Material for Vocational Investigation.
    - Conference with experts.
    - Discussion of reports.
8. Social Legislation and Vocational Guidance.
    - Lecture and symposium by specialists.
9. Educational Survey and Guidance.
    - Methods of educational guidance in schools.
    - Symposium.
    - Review of material.
10. Factors in Vocational Choice.
    - Personal, educational, social, and economic analysis.
11. Factors in Vocational Choice (continued).

12. Vocational Guidance Technique.
    Analysis of individual cases.
    Typical sessions of counselors.
    Methods of recording data.
13. Phases of the Vocational Guidance Movement.
    Review of experiences.
    The work of a vocational bureau.
14. Vocational Guidance Abroad.
    England.
    Scotland.
15. Germany.
16. Methods of Follow-up and After-care.
    Discussion of programs.
    Medical inspection at the start in life.
17. Relation to Employers.
    Hiring, promotion, discharge.
    Symposium.
18. Relation to Employers (continued).
19. Relation to Vocational Education and Other Movements.
    Prevocational, etc., types of schools.
    Educational readjustment.
20. Review of Investigations by Members of the Class.
    Social gains.
    Organizing vocational guidance.
    Final definition and terminology.

This course of study aims to provide teachers with the theory and technique of vocational counseling. Following is a list of some of the topics treated by experts at the Boston counselors' meetings:

Topics Treated at Boston Counselors' Meetings.

The shoe industry.
The boy and girl in the department store.
The machine industry.
A group of trades for boys.
The telephone industry for girls.
Stenography and typewriting for girls.
Bookbinding for girls.
Architecture.
The use of statistics.
Mechanical and civil engineering.
Electrical engineering.
The machine trades.
Agriculture.
Textile-mill working.
The building trades.
The selling clerk.
The needle trades.
Opportunities in the department store.
A social suggestion on boys and girls as wage earners.
Trained nursing.
Condition in industry for the young girl wage earner.
Vocational opportunities for the girl who completes the high school.
The shoe and leather industry.
Lunch-room and restaurant work for young women.
The department store.
Education for store employment.
The metal trades.
The profession of business.
Girls in the candy factory.
Printing.
The new child-labor law.

Through parents.—Vocational guidance has a great opportunity and responsibility in its cooperation with parents and parents' organizations.

The Boston Home and School Association, for example, is founded on the basic principle of the proper home training of children. To the clear conceptions of the value of fostering cooperation between the home and the school, of the importance of studying methods of child training, and of the relation of civic improvement to child welfare is to be attributed the notable growth of the association.

Through this organization parent and teacher unite in working for the child. Such understanding and cooperation meet a great need in the public-school system.

The meetings of parents' associations furnish a rare opportunity for parents and teachers to become acquainted. The parent may tell the teacher his ambitions for the child and explain peculiarities which might otherwise puzzle the teacher; the teacher, on the other hand, has an opportunity to explain motive and method in school work and to act as a friendly adviser. In vocational guidance this work is of supreme importance, dealing with the home side of guidance, and may be briefly summed up by a quotation from an annual report of the association:

> In no place is this mutual assistance more necessary than in choosing a vocation. Neither the parent nor the teacher can decide, to the pupil's best advantage, as to what occupation he should go into until his intellectual propensities, as shown by his school work, are measured with his general aptitudes as illustrated in his home life. Consultations of parents and teachers have proved most effective in gaining a true estimate of the pupil's fitness. That the parents appreciate the value of such cooperation is shown by the large attendance at the meetings where the subject of vocational opportunities and preparation for a vocation is discussed. The opportunity to meet personally a vocational adviser has been gladly seized by the parents. In order to obtain data which will give the teachers enlightenment with regard to every child, the Home and School Association proposes to send out to parents a questionnaire which will elicit the following information: 1. The educational ambitions of parents for their children. 2. How much parents know of educational opportunities. 3. The vocational ambitions of parents for their children. 4. Limitations of parents to carry out their desires. 5. How much parents know of vocational opportunities, and how much serious thought they have given to the vocational needs of their children.

The vocation bureau has counseled with parents and advisers of youth from its beginning. It has cooperated with the Boston Home and School Association steadily, and the two organizations have published jointly *The Boston Home and School News-Letter*, which has been of value to the fathers and mothers of thousands of school children.

Through employers.—The vocation bureau has constantly borne in mind the proposition that a sound development of its work depends not only on close contact with schools, neighborhoods, teachers, parents, and children, but also with employers, business bodies, industrial experts, and the occupations themselves in all their breadth, variety, and changes. Occupational investigation, fundamental though it be, is not vocational guidance. The investigation determines, to be sure, what kind of cooperation is possible or desirable, and on what terms; it is the basis of vocational information, of plan making for special training courses in schools, and of social and legislative action; but the vocational guidance idea requires that contact with the employments be something more than onlooking. Moreover, there are splendid agencies for specialized research, such as the Sage Foundation, with its thoroughgoing studies of industry. A vocation bureau must be, among other things, a research body; nevertheless, it must depend for some of its most valuable material on important research agencies. Moreover, its work must not duplicate the work of the child-welfare agencies, nor solely promote vocational education. The National Society for the Promotion of Industrial Education and the commissions at work in various cities and States are better equipped for this work. It is the special business of a vocation bureau to organize the prolonged service which takes hold of the child when the life career motive is awakened, to help guide, train, and tide over that child during the difficult transition period into the occupations; direct the child, when it is genuinely ready for employment, into the most advantageous openings possible; and stand by the young workers, so far as may be, throughout their occupational life.

The employer's interest is absolutely essential to such a plan. To fail to profit by his criticism, by his point of view, by his important cooperative possibilities, is to invite failure. The bureau is in close touch with a large number of industrial, commercial, and professional concerns in sympathy with its purposes. Employers have approved its methods and have supported its efforts for more thoroughgoing protection and opportunity for the young worker.

Better to understand the employer's relation to vocational guidance, the bureau organized in 1912 a conference of employment managers. Men representing a score or more of the important manufacturing and business establishments have been meeting regularly in informal conference. In December, 1912, an Employment Managers' Association was formed, whose objects are defined in its constitution as follows:

ARTICLE I.

NAME AND OBJECT.

SECTION 1. The name of this organization shall be the Employment Managers' Association.

SEC. 2. The objects and purposes of the organization shall be:

1. To discuss problems of employees; their training and their efficiency.

2. To compare experiences which shall throw light on failures and successes in conducting the employment department.

3. To invite experts or other persons who have knowledge of the best methods or experiments for ascertaining the qualifications of employees, and providing for their advancement; and more particularly to study the questions connected with the most effective employment of young people.

Through research and publications.—Vocational guidance, like vocational education, must base its work not only upon a study of the youth and his environment, but upon accurate knowledge of the occupations open to young people. Such knowledge, wherever possible, should be gained by first-hand investigation of shops and factories and business offices in every community.

The objects to be sought for in such studies are:

1. To present vocational facts simply and accurately.
2. To make accessible a knowledge of all the employments—the professions as well as the trades, skilled, semiskilled, and unskilled; the business, the homemaking, and governmental callings; and also any new and significant vocational activities of men and women.
3. So far as possible to supply parents, teachers, and others interested with the material necessary for an intelligent consideration of the occupations, their needs, demands, opportunities, relative desirability, training requirements, and the possibilities they offer for careers.
4. To analyze the relation of vocational aptitudes, interests, and habits to modern industrial demands, and thus lay an adequate foundation for a system of training regardful of social as well as economic needs.

The proper utilization of such material should make for a heightened interest in the community's training opportunities, and should make the fact increasingly clear that society will gain immensely by devoting the adolescent period in whole or in part to preparing for the start in life. Above all, the studies should help toward a clearer understanding of what working life ought to develop in social as well as in wage-earning efficiency.

They should show also clearly and emphatically what the world of employment expects and demands of the vocational school.

The movements for vocational guidance and vocational education have done nothing better than in making clear the social wastefulness of employing children from 14 to 16 years of age without a compensating program of training. These are the foundation years of vocational efficiency. Skilled mechanics know this, and they safeguard these years for their children by careful search of available apprenticeship opportunities.

The laws in several States stipulate that children from 14 to 16 years of age must be at work or at school. These provisions mean little unless they carry a supervised program which looks to definite training for advancement in a selected occupation.

This at bottom is the social viewpoint. Efficiency in living life as a whole, as well as efficiency at work, is the goal of the vocational movement in education. Vocational guidance aims to lay down the specifications for a life career, vocational education to supply the best methods for working them out; and if the message of these enterprises is heeded in the occupations, we may expect employment to be a period for consummating the labors of the school.

Chapter VIII.

PROPER METHODS OF FINANCING.

PRELIMINARY.

The chief source of material used in the preparation of this chapter is the Report of the United States Commission on National Aid to Vocational Education. Credit should therefore be given to the members of this commission for the fundamental ideas which underlie the main features of the following suggestions. The terms used in describing the various types of education are the same as those used in the chapter upon terminology, to which the reader is referred for specific definitions and illustrations whenever words used are not clear. Appreciation should also be expressed to the National Society for the Promotion of Industrial Education for use of its reports, to the Massachusetts State Board of Education for its report of 1913–14, and to such other persons or bodies as have contributed in any way to the literature which has helped in the final presentation of this important topic.

It was thought that the method of consultation and conference in arranging this material would give a result which would be of much more value than would be the opinion of any single individual. This chapter should therefore be regarded as a composite statement of the most suggestive ways of financing this method of education which have yet presented themselves.

Cost is the heart of the business system. The business man or corporation counts and provides for cost before any undertaking is entered into, and at every step of its later development. Sound finance lies at the basis of every successful enterprise in the business and industrial world, and it is certainly of the highest consideration in the great fields of education, both general and special.

The established forms of education in the so-called cultural and liberal branches have long been maintained at public expense. As it is so largely a question of State-wide welfare, the State is recognized as the large unit, supervising, cooperating with, and aiding the work of the local unit of town or city.

Along with general studies, training for business and the professions has had a measure of provision; but vocational education in its broader sense has only lately come to receive even a part of the attention it rightly deserves.

In early times the responsibility of training for an industry rested upon the family. Then the son followed the trade of his father.

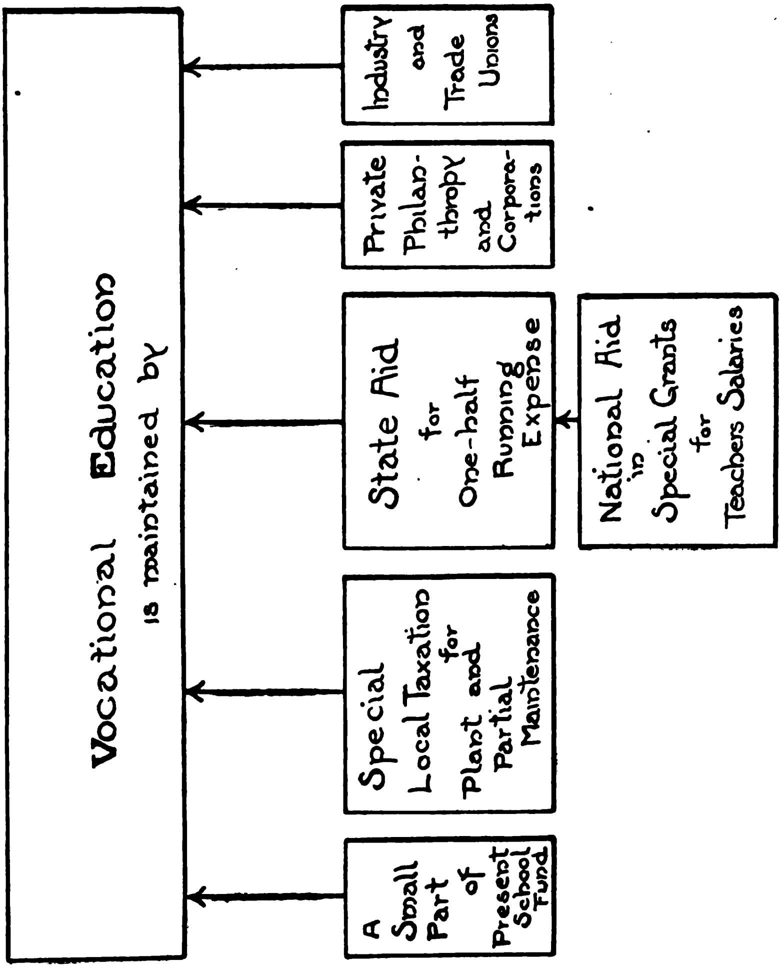
Vocational Education is maintained by
A Small Part of Present School Fund
Special Local Taxation for Plant and Partial Maintenance
State Aid for One-half Running Expense
National Aid in Special Grants for Teachers Salaries
Private Philanthropy and Corporations
Industry and Trade Unions

CHART II.—FINANCE.

Later this responsibility was transferred, in a measure, to industry; and the apprenticeship system resulted. Now has come the movement to transfer the responsibility still again and place it upon the State through the establishment of schools. And thus the schools are in turn asking industry to help bear the burden, to the extent of providing apprenticeship opportunity and counsel to supplement the best that the schools can do.

Before discussing methods in financing vocational education, let us clearly understand just what it is that calls for support. From every point of view the establishment of a system of vocational schools should be clearly defined in its financial aspects. Its purposes and provisions must not be confused with those of other kinds of education, however worthy these may be in themselves.

The idea is spreading rapidly among the States that State support should be given for education carried on by local communities. The general tendency seems to be for the State to give money to encourage new kinds of education. Local communities are still left to pay largely for the support of the liberal and cultural education which the schools have long given.

Vocational education, then, is the later form that calls for additional support. Briefly stated, there are six kinds of vocational education, as follows: Professional, commercial, agricultural, industrial, home making,[1] nautical.

Professional education is provided for by public and private schools and institutions, for pay, in the East; and by all grades of educational institutions, particularly State universities under certain conditions without cost to the student, in the West. It is usually for persons who have completed their secondary education, however.

Commercial education is also provided for, in some measure, by public commercial schools and courses, by private business schools, and by college and university departments of business administration and finance.

Nautical education, the least of all in numbers affected, is provided for by the Massachusetts Nautical School and by private and professional schools.

We have left, then, three kinds of vocational education—agricultural, industrial, and household arts—calling for public and private support, in addition to the great sums of money already devoted to the cause of education.

The problem of support for these three forms of vocational education has also three natural and clearly defined aspects:

I. Vocational education supported by the public.
II. Vocational education supported by private philanthropy and by corporations.
III. Vocational education supported by joint agreement between employers' associations and labor unions.

I. VOCATIONAL EDUCATION SUPPORTED BY THE PUBLIC.

This is much the largest division of the problem and the one awakening the greatest interest the country over, even though but few of the States have as yet passed State-wide laws establishing systems of vocational education. This division is in so great a degree a question of industrial education that the principles and methods worked out by the National Society for the Promotion of Industrial Education may be regarded as fundamental in its treatment. Substantially the following principles have been evolved by the national society and by State and local boards and agencies. An effective program of vocational education will cause an increase in the expenditure of public moneys for school purposes, for the following reasons:

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[1] Used at present as a more comprehensive term than "household arts."

1. More money will be needed to pay teachers, because those equipped with the desirable qualities and trade experience are now receiving in the trade a higher salary than has formerly been paid to teachers of such work.
2. This work demands selected teachers of experience and preparation in the trades.
3. Shops when operated in connection with the schools cause additional cost in equipment and maintenance. In some cases this may be partly offset by the production of articles in the shop.
4. Opening up new types of service to a group for whom as yet little or no provision has been made.

It may here be noted that the cost per pupil for training in the vocational schools is now somewhat higher than for training in the ordinary schools because of the added cost in teaching and equipment, as above stated. While it is yet too early to give accurate statistics, the fact remains and makes the need of added revenue more emphatic.

Many local communities are already burdened by the attempt to meet the demands which the present time is crowding upon the regular schools. In some towns and cities the added taxation can be undertaken only with great difficulty, if at all. Local communities are not willing, without State aid, to tax themselves for the purpose of training workmen who are extremely likely to drift off into other communities to raise the standard of citizenship and workmanship elsewhere.[1]

As far as the community is concerned, the necessary revenue to provide for vocational education may be provided for in two ways: First, by a redivision of the revenues of the community so as to give a larger proportion to vocational education. This method would, of course, diminish the portion devoted to cultural education. Second, the needed revenue may be secured by a special appropriation for vocational education in addition to the amount given for general education. This method, as has been said above, gives a greater burden than some communities with low value and taxable property and yet having considerable population can well bear. All authorities agree in the wisdom and desirability of the plan generally followed in this country of a special levy for public-school purposes in the annual tax budget, the resulting revenue to be expended by the local school board for such kinds of education as the community demands.

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[1] Cf. Rept. of U. S. Com. on Nat. Aid to Voc. Educ., pp. 32–33.

Local resources are, therefore, upon the whole, insufficient for the desired expansion of vocational secondary education in the vocational lines that will provide training for thousands of young people in every State. For this reason the larger community, the State itself, must contribute to the expenditure. While this entering into partnership by the State is primarily to give financial aid and encouragement, it brings other advantages which are concerned with the general welfare of the State and individual in almost the same proportion as they are concerned with vocational education. It may well be borne in mind, however, that most effective results can be produced only when there is complete cooperation between the local community and the State, with the local community exercising its own initiative so far as may be possible. The following are the generally accepted reasons for aid by the State in establishing vocational education:

1. To encourage local communities to give specific vocational education as a new and needed kind of training, beneficial and desirable in the interest of the State as a whole.
2. To aid communities with their varying resources to provide effective vocational training.
3. To secure for the State the right to a reasonable participation or voice in the development of vocational education in the State.
4. To make it possible to secure a "State minimum of efficiency" in the conduct of vocational education.
5. To pay the just share of the State in a kind of education which, comparatively speaking, must be expensive, but which is of State-wide benefit.
6. To place upon the State a part of the cost of training "mobile labor."

The welfare of the community means the welfare of the State, and the need and value of cooperation in the widest possible extension of the new education are self-evident.

The amount of aid to be given by the State is, of course, the all-important consideration. It should be sufficient to induce local communities to get the work started and to justify reasonable voice by the State as the nonresident partner in the control and administration; but State aid should not be so much as to sacrifice local initiative and support, or that pride and interest which is characteristic of all people in the institutions that have grown out of their own planning and their own sacrifice. Up to this time the general method has been to let the local community furnish the plant and equipment and pay approximately one-half of the operating expenses. The town or city should be required to show a need for the school and its interest in it by building and equipping the plant and paying half of the operating expenses, the State paying the other half. Another way is for the State to pay two-thirds of the salaries of all the teachers employed in the work, whether in trade subjects, or technical subjects, or such academic subjects as may be needed to complete well-rounded courses. Two-thirds of the salaries of the teachers is assumed to amount to practically one-half of the operating expenses. Under this plan of payment the State board of control is relieved of the difficulty of auditing the complicated accounts of the local communities. About all that is necessary under this plan is for the local authorities to make affidavit at the end of the year that they have spent so much money for instruction, or for teachers' salaries. On recommendation of the State board, after the work of the school has been approved, the aid should follow.

Payments to local communities should not be made automatically, but only with the approval and recommendation of the proper State board of control for work actually accomplished. The State is a different entity from any or all of the communities within it. The money in its treasury does not belong to the cities and towns, but to the citizenship of the State as a whole, entirely irrespective of the local boundaries. It should be spent by the State, not for the benefit of the local community, but for the best interests of the whole Commonwealth. The State should give money to the town or city in payment for a definite service—that of providing a good school giving a good training for good citizenship and good workmanship. Any locality should be entitled to its share of this money, not automatically as a right, but only when it has rendered the service for which the State has, through its law, agreed to pay. The State board of control should not only be charged with the duty and responsibility of finding out for the State whether or not any school is meeting reasonable standards of efficiency, but it should also be authorized to distribute money to the local community only after and not before the work has been accomplished.

The better plans seems to be to approve the school program in advance. For example, a full program for the work of a school is drawn up by a local board, in consultation with the State board, and is approved by the State board before being put into effect. This enables the State more easily to set a standard and to follow it up in the actual conduct of the school. It strengthens the bond of cooperation and interdependence between the State and the community. Financial aid is not given, however, until the work has been done.

In passing upon a school, a State board should have the power to go over every feature of its work, including all such items as location, equipment, courses of study, method of instruction, qualifications of teachers, and expenditure of money. In many of the States this is secured by a provision in the law giving the State power to approve the school, but leaving the latter free to operate according to its own discretion.

State-aided vocational schools should be free to all the people of the State. If State funds are to be used for their support, these institutions should be open to every child in every part of the Commonwealth. Each school must, of course, adapt itself to local needs and conditions. There might be a school at one point for one industry and other schools at other places for various different industries. In order that every one in the State may have a chance to prepare for the wage-earning occupation which he wishes to follow, a system of exchange of pupils should be put into effect in order to meet the case of pupils nonresident in a given community. Provision should be made by a contribution from the community in which he attends school, amounting, of course, to one-half the real cost of training. This can be accomplished in two ways: First, the community in which the pupil resides may pay the community in which the pupil attends school the full cost for tuition of the pupil and later receive reimbursement from the State to the amount of one-half the expenditure; second, the community in which the pupil resides may pay the community in which the pupil attends school one-half the cost of such attendance. It would appear that from the standpoint of vocational education the first plan is preferable, inasmuch as all financial dealings would be carried on between the State and the individual community rather than between different communities, and further, that partnership of the State in vocational education would be continued.

Such method of interchange of pupils between communities would limit or reduce the number of vocational schools in a State, and would tend to lessen the per capita cost of training pupils. The total cost in plant and equipment, and the running costs, to be divided between the communities and the State, would be reduced. Cooperation, supervision, and the maintenance of a desired standard would be more fully assured.

State aid for vocational education in towns and cities has a foundation in theory and practice. Industrial welfare demands it, and the results already worked out give promise of better things to come.

A matter of considerable interest to this new movement in education, and a possible item of cost to the public, is the training of teachers for the vocational schools. Persons drawn from the trades and having trade experience only must be given further training in related subjects and in the principles of teaching. They will be slow to do this at their own expense and loss of time. Such special preparation must largely devolve upon normal schools and upon towns and cities and States in the conduct of particular groups or classes of these new recruits to the teaching force. Pay must be made attractive and the means of entering inexpensive. Fortunately it may be said that several States are already taking progressive steps in the training of such teachers.[1] One of the most recent experiments along this line has been the attempt in Massachusetts to train teachers through evening instruction work to become instructors in the vocational schools of the State. Several classes of this kind were carried on in various centers of the State during the fall and winter of 1914–15. The results of this training will be seen in the work of the vocational schools in Massachusetts during the present and succeeding years. Hence, this may serve as a basis for future action in the training of teachers.

FEDERAL AID FOR THE STATES.

Federal aid is needed to provide the same stimulus to the States which the communities receive by State aid. The States in a sense are industrial and commercial unions competing in a friendly way with one another. The large argument in favor of national grants for practical education in the communities is that this Nation is an economic union. The markets of the world are open to the products of our industries, and therefore the National Government is interested in the industrial efficiency of every section of the country. If the Nation is to profit as a whole, then the Nation should provide the stimulus and support which would encourage the States to provide vocational education to increase the wealth.

The States are already burdened to their limit, in many cases, for general education.[1] There are also great differences among the States in taxing ability. New York, for example, has eighteen times the per capita wealth of Nevada. The burden of establishing industrial schools will fall very heavily on two types of communities or States—the rural community with scattered population, and the industrial center whose population increases rapidly and whose taxes increase in greater proportion than does the amount of taxable property. The Southern States, as a rule, are poor and will have a hard problem.

The problem transcends State boundaries, and is distinctly a national one. "A man may be born in Indiana, trained as a worker in Massachusetts, and later spend his days as a machinist in California."[1] Twenty different States furnish the men for one construction concern in New York. This concern, again, does business in 12 different States. It is estimated that about 75 per cent of the workers in many cities were born and trained in other places than those in which they are working.[2]

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[1] The fundamental ideals involved in the training of teachers for vocational education were taken from the report of the commission previously referred to. Cf. pp. 75–76.

The magnitude and importance of the subject as a national question is indicated by the fact that members of the Cabinet have interested themselves even to the extent of appearing before the commission on Federal aid favoring plans for national support. Hon. William C. Redfield, Secretary of the Department of Commerce, made an extended statement to the commission on May 8, 1914, in which he stated that he regarded the question of vocational education as being "the single, most serious subject affecting American life" which is under consideration to-day. He further stated that he believed that the problem is so large and covers so much ground that it should be dealt with by the greatest power in America. A statement was also made by Franklin B. Dyer, of Boston, April 30, 1914, to the effect that the stimulus which would come from Federal aid is a necessity in order to place squarely before the country at large the importance of vocational education, and further that there was no doubt that the Government could with propriety designate methods of expenditure of money raised by it.

There is abundant precedent for national aid to the States for vocational education, from the Morrill Act of 1862 to the Smith-Lever Bill of 1913.

One hundred and thirty million acres of lands, all told, have been granted to the States for common-school development. The income from these grants has exceeded $600,000,000. This amount has been used largely for teachers' salaries. These grants have been largest in the West, because of the setting aside of land by the Government for school purposes in each new State as it came into the Union from the Northwest Territory.

Under plans proposed by the vocational education commission large sums of money may soon be devoted annually by the Government to industrial schools. These may be allotted for the salaries of teachers in industrial, including agricultural, subjects; in the training of teachers for industrial, agricultural, and household economics subjects.

The device of the national grants to local districts has been in operation in England for nearly a century. From this experience there have been developed certain principles which are of special significance to legislation involving both State and Federal aid in this country. English practice teaches us that the purpose of grants must be definite. The need for help in a community should be an actual need, grants should be fairly distributed, the amounts should be based on actual community expense, and they are to be granted only upon the maintenance of fixed standards of school efficiency and cooperation between the State and the school.

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[1] See Rept. of U. S. Com. on Nat. Aid for Voc. Educ., pp. 32–34.

[2] Rept. of U. S. Com. on Nat. Aid for Voc. Educ., App. I, p. 118, "Mobility of Labor."

Sidney Webb, the best-known English writer on this subject, in his book, "Grants in Aid," tersely states some of the principles developed from English experience in the form of reasons for grants by the English Government to local districts as follows:

> It has accordingly become an axiom of political science that, with our English administrative machinery, grants in aid of local governments are indispensable.
>
> 1. For an equitable mitigation of the inequalities of burden.
> 2. To secure effective authority for the necessary supervision and control of the National Government.
> 3. To encourage the kind of expenditure most desirable in the interest of the community as a whole.
> 4. To make it possible to attain to anything like a universal enforcement of the "National minimum" that Parliament has prescribed.

These reasons the English people have come to accept as the result of nearly a century of experience, and it is by far the best statement of principles and reasons for granting national aid which has come to our attention in the preparation of this report.

II. VOCATIONAL EDUCATION SUPPORTED BY PRIVATE PHILANTHROPY AND CORPORATIONS.

Private philanthropy has its definite place in American life; that place is to do new things which need to be done, to blaze the trail, pioneer the way, and prove the need. The private school can always experiment, but can rarely consummate on a large scale. Schools carried on under public auspices can consummate, but can not generally experiment as satisfactorily. Vocational education, therefore, carried on by private funds should look to turning over to the public school the work and methods which it has proved worth while, and make these benefits available for larger groups. As a general thing, gifts to such work should have regard to the final outcome of their benefaction, which should be that of encouraging and stimulating the public to act on a wider and larger scale with public funds when the worth of that work has been proved. It is against good public principle to appropriate public money to private institutions in the control of which the public has no voice.

This division includes schools conducted by individuals, corporations, and institutions, some of which are of a permanent nature, to do the work which the public schools have failed to do or can not well do, especially in the case of older youth and young men and women, and in the East much more than in the West. Typical examples are the North Bennet Street Industrial School and the Wentworth Institute, in Boston, and the apprenticeship school carried on by the General Electric Co., at West Lynn. Such schools set standards for the public vocational schools, and in a measure round out the system of industrial education. If they were conducted by the State and free to the people of the State, as in the West, they would reach thousands who can not now afford the expense of attendance.

Nor is there lacking evidence that such schools can be taken over by the municipal authorities and carried on successfully. There are already notable examples where this thing has been done; among others may be mentioned particularly the Boston Trade School, which was formerly carried on under private auspices, as was the Manhattan Trade School in New York, and the Milwaukee Trade School in Milwaukee, Wis.

III. VOCATIONAL EDUCATION SUPPORTED BY JOINT AGREEMENT BETWEEN EMPLOYERS' ASSOCIATIONS AND LABOR UNIONS.

Formerly master and workman felt and discharged a common duty and responsibility for the training of workers, in order that the integrity of the craft might be preserved. Modern industry shows a decided tendency to throw the entire burden of expense and trouble of every kind on the schools. Part of this is, of course, due to the fact that the schools have not yet been able to present to modern industry a program of cooperation in vocational education which promises to be put into widespread use. It is certain that the school men can not solve this problem themselves. They must have the close and intimate help of employers and employees in the trades and other occupations dealing with the question. With the school authorities as a third party, an increasing number of employers and trade-unions will undoubtedly be willing to confer together upon ways and means by which they can aid the schools in the training of workers.

Matters which ultimately and vitally concern both the employer and employee are being dealt with by means of joint agreements, known in some industries as protocols. It has come to be recognized that in many industries, as in the case of the garment trades, the training of the worker should be as much a matter of trade agreement as hours of labor or scales of wages. Under the protocol a growing number of employers' and employees' organizations are finding themselves willing to recognize educational training and to go to the trouble to so organize the work as to offer their young workers time away from their employment for such training. Under such private arrangements the vocations themselves must bear either all or a part of the cost. Shops must offer the opportunity for the shop training, leaving the schools to give related instruction; or, in many cases, shops and factories and commercial houses must provide facilities for classroom instruction under the roof of the plant. Some great industries, like the garment trade, draw together large numbers of workers in the unions having large resources. Employers and unions should be led wherever possible to undertake, to a large extent at least, the joint burden of responsibility concerning their own workers. The financing of such schemes should be in part by the workers and in part by the employers, and if in cooperation with the public schools, in part by the public, subject, of course, to such control and approval as is consistent with the expenditure of public money for educational purposes.

The population and industrial nature of a community determine the problem of local taxation for the support of industrial education, as has already been indicated; but State aid or National aid should be available to all communities, large and small, alike, upon the basis at present of local expenditure in proportion to the contribution which the community itself makes and the meeting of certain standards and conditions.

To recapitulate certain financial sources briefly, it may be said—

1. That some progress can be made in vocational education by saving effected by reorganization and readjustment in the present plan for education in the community, this to include a segregated budget of school expenditures. The relief afforded by this method will not be sufficient and will not greatly affect the general question. Nevertheless it is one of the methods by which waste may be avoided and the support of the public secured.
2. That in some instances increased taxation of the local community may be resorted to, but that the burdens thus placed upon the various communities will be onerous and unequal.
3. That the problem is State wide and even of national proportions. State aid for communities of varying needs and abilities, and national aid for States of varying economic conditions, are absolutely necessary for any large and lasting solution of the problem. Industrial and educational experience in this country and abroad justifies this point of view. This is the only nation-wide solution.
4. That much may be done by private philanthropy in experimenting, pioneering, and setting of standards.
5. That large communities may settle the question for large industries by educational, industrial, and trade-union cooperation and agreements.

The considerations which have arisen in discussing this problem of finance, as well as the considerations which have arisen in the other chapters of this book concerning the work of vocational education in general, force upon us the conclusion that vocational education is bound up indissolubly with many other vital problems. Among these may be mentioned those which have to do with the efficiency of the workers on the one hand, and with the state of public opinion and the willingness of the public to sacrifice on the other; with the prosperity of the community and the State, as well as with the taxing resources of the community; with the general allotment of funds not only for general education, but for the other needs of the community; and with the methods of taxation in operation in a given State. These problems are all, to a greater or less extent, further complicated by the question of cooperation between worker and employer, by the traditions and methods in use in the great field of education, and by the general progress of industry.

From the fact that these problems are so intricate and subject to such sudden and unexpected changes, it is almost impracticable to suggest methods and plans for financing vocational education which shall meet all of the varying needs of the widely scattered communities in which it may be desired to introduce types of education to serve specific ends.

Chapter IX.

PROBLEMS OF VOCATIONAL EDUCATION.

Vocational education in schools is of comparatively modern development, especially in other than professional fields. Hence, administrators still encounter a large number of unsolved problems. Furthermore, all education is still in prescientific stages of development; and in proportion as efforts are made to reach scientific stages, new problems are revealed in the fields of liberal or general education, which also affect vocational education. The object of this section is chiefly to attempt to analyze and give definite statement to some of these problems.

It is believed that every attempt looking to clearer analysis and definition of the problems of vocational education will hasten the day of experimental and other systematic attempts at the solution of these problems. This process of analysis and definition should be steadfastly opposed to the thinking in terms of "omnibus" generalizations that is so commonly characteristic of addresses and published articles dealing with the purposes and methods of vocational education. Definition, systematic organization of experience, experiment, measurement of results—these are some of the means by which education may be expected gradually to take its place among the departments of applied science.

I. THE RELATION OF GENERAL, OR LIBERAL, TO VOCATIONAL EDUCATION.

Problem 1. To what extent do studies designed for liberal education "function"[1] as to their content in various fields of vocational training?

For example, do Latin, ancient history, and algebra "function" at all in the training of the physician for his vocation? Do mechanical drawing and science "function" in the making of the bookkeeper? Does the study of music and art make any recognizable contribution toward the efficiency, on the vocational side, of the machinist, the farmer, or the cook?

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[1] The word "function" is used here in the sense that means and methods as adopted lead to results as intended. Studies, as well as methods of instruction, are means to ends; they "function" when the ends are realized as intended.

Problem 2. To what extent and in what way do studies in general or liberal education so " function " in mental training as to make important contributions toward vocational efficiency?

For example, does the study of mathematics contribute to the development of the mental powers requisite in the lawyer, the dentist, the music teacher, or the homemaker? Do the interests and types of appreciation develop in the study of literature " function " at all as valuable mental qualities in the training of the engineer, the house carpenter, or the clerk?

Problem 3. To what extent and under what conditions do various special types of vocational education so " function " as to result in the knowledge, appreciation, and ideals that are important in liberal education?

For example, in the case of a student who has studied little or no science, what will the vocational study of agriculture contribute as a by-product to his general insight into the applications of science? In what way will the study of teaching as a profession supplement deficiencies in liberal education? Will an effective program of vocational training for the house painter contribute materially to his general intellectual and esthetic development?

Problem 4. To what extent and under what conditions will systematic vocational education contribute, as regards mental training, to the ends that are valuable in general education?

In what ways, for example, does the close application to practice and theory required in the training of a printer develop such so-called general intellectual powers as attention, concentration, order, or the concentration and close thinking required on the part of a boy studying farming practically and theoretically result in the development of corresponding general mental powers? To what extent do the strong interests frequently evoked by vocational studies call into activity mental powers left inactive in general education?

Problem 5. To what extent is it expedient and desirable that the beginnings of systematic vocational education shall be postponed until after a definite degree of general or liberal education has been attained?

For example, if we assume that pupils are required to attend school until 14 years of age, is it expedient or desirable that from 12 to 14 a program consisting in part of vocational and in part of liberal education shall be made available? Is it practicable or desirable, in the case of youths from 14 to 16 who are to enter industrial callings at 16 years of age, to offer combined programs of liberal and vocational education prior to that age?

Problem 6. In case it seems desirable to divide the pupil's time at any given stage between vocational and liberal education, how shall the division be made?

For example, shall studies be alternated by hours, as in an ordinary commercial high school; that is, one period, perhaps, being given to algebra, another to stenographic practice? Or shall the day be so divided that one-half may be effectively given to concentration on vocational pursuits and the other half to general education? Or is a division on the basis of longer periods desirable; for example, one week being given to liberal education, another to vocational; or six months to liberal and six months to vocational education? Is a third program preferable, whereby the central part of each working day shall be given either to vocational or to liberal education, as the case may be, with the marginal part to the other type? For example, pupils might work from 8 to 3 o'clock on general studies (or vocational studies), and from 3 to 6 on vocational studies (or liberal studies). In practical life, it will be remembered, men usually pursue their vocations during the greater part of each working day, reserving evenings, holidays, etc., for recreational and cultural purposes.

II. PROBLEMS OF SO-CALLED GENERAL VOCATIONAL EDUCATION.

It is contended that certain studies or practices serve as a basis for general vocational education; that is, presumably give fundamental elements needed in many callings.

Problem 1. To what extent are any of the studies usually found in a program of general education (excepting reading and writing) vocationally fundamental to a number of callings?

For example, it was formerly asserted that the study of Latin was vocationally fundamental to the subsequent study, for professional purposes, of law, medicine, theology, education, and botany. It has long been thought that the study of mathematics is vocationally fundamental, not only to the engineering professions, but also to law, medicine, and almost all other advanced pursuits. It is a widespread belief that mechanical drawing is fundamental, in a vocational sense, to industrial, agricultural, and perhaps even commercial pursuits. Again, there survives a belief that a program of vocational education might be devised which would train the so-called handy or all-round practical worker.

Problem 2. Does modern society present a general demand for the person who, while not exceptionally proficient in any calling, is ready and practical in many; for example, the man "handy" with tools, the "all-round" clerk, etc.?

Problem 3. What courses of practical instruction will train the "handy" man, as he is in demand, for example, in farming communities?

III. PROBLEMS OF THE TRANSFER OF RESULTS OF VOCATIONAL EDUCATION.

Problem 1. To what extent and under what conditions do the results in skill, knowledge, appreciation, and ideals (or of practical experience in general) in one occupational field constitute an asset for entrance into another?

Problem 2. To what extent can the results in skill, knowledge, appreciation, and ideals (or of practical experience in general) obtained in one occupational field be utilized as a basis for systematic training toward another occupational field?

The following are examples of these problems: (1) To what extent does expertness in running constitute an asset in learning to swim? (2) To what extent can a thoroughgoing education in the practice of medicine be utilized when the doctor wishes to become a farmer? (3) How far can professional competency as a bookkeeper be regarded as an asset when the bookkeeper wishes to become a machinist? (4) If a man has been well trained as a machinist, to what extent can such training be drawn upon in equipping him to be a house carpenter? (5) A farmer's son "picks up" a great variety of vocational experience; to what extent does this constitute an asset when he wishes to become a physician, a locomotive engineer, a manager of an industrial enterprise?

(*a*) It is obvious that these problems are capable of being scientifically investigated as soon as psychology possesses the necessary tools. There exist now a large variety of popular beliefs or prejudices on the subject. For example: (1) Some vocational-school authorities believe that boys aged 16 or more, who wish to learn a trade, succeed much better if from 14 to 16 they have had a miscellaneous industrial experience as job workers in various unskilled or juvenile occupations. But effect of selection is obvious here, and probably deceptive. Only boys of exceptional character, probably, seek admission to industrial schools after such a period of miscellaneous experience.

(2) There is a widespread belief that the varied and often intensive experience obtained in farm life constitutes a valuable basis for almost any kind of subsequent employment.

(3) It is also believed in some quarters that persons who have for several years habituated themselves to a special line of manufacturing or commercial employment (for example, bookkeeping, shoemaking, draftsmanship, weaving) are permanently disqualified in large measure from taking up employment in other fields.

(*b*) Even superficial analysis will show that these problems must be approached with reference to particular types of qualities involved. For example, few people would assert that skill obtained in playing baseball can be directly utilized in learning to swim. On the other hand, results of physical development, such as lung power, strength of arm muscles, etc., obtained in baseball may constitute a valuable asset in learning to swim. Again, the life of the farmer's son may give little direct preparation in skill or knowledge for the work of a physician, but, on the other hand, a general attitude toward work, a disposition to finish jobs once undertaken, an appreciation of the value of money or recognition resulting from successful work may in large measure be transferred.

(*c*) Much will depend, naturally, upon the relationship of the various occupations involved, according as these deal with similar working conditions, similar tools, identical materials, etc. One would expect a drill-press operator to bring to the work of the planer a variety of important assets, while one would not expect the bookkeeper to bring to house carpentry at least similar assets.

(*d*) It must be recognized that prolonged practice in any occupation may, in an important degree, disqualify the person for pursuit of another not related to it. The man who has followed farming for several years is in many respects disqualified to become a counter salesman of dry goods; the actor disqualified to become a farmer; the machinist to become a bookkeeper; etc.

(*e*) The question is an important one for several reasons. In the first place, there are many occupations which can not be entered upon in youth—for example, that of locomotive engineer. The locomotive engineer must have served in some other calling for several years, for which, presumably, he could have had systematic training. Will his previous experience as stationary engineer or as fireman constitute, in the long run, a sufficient preparation for his work as locomotive engineer? Again, systematic vocational education in schools for some occupations is easily possible; for others, extremely difficult. If a transfer can be easily effected, then we might train a person to be a house carpenter or a farmer, even though we knew that eventually he would follow the sea as a sailor or later work underground as a coal miner.

IV. THE PROBLEMS OF PROFESSIONAL EDUCATION.

The problems of professional education are in the main remote from the purpose of this paper. But one of general interest is that relating to the extent to which a program of professional training must base the so-called technical studies upon foundations of practical experience.

Problem 1. To what extent does effective vocational education for any profession require that the present order of studies which involves the giving of technical instruction in advance of practical experience should be modified, or even reversed, to the extent that a certain amount of practical experience shall be taken perhaps at the outset and at intervals in the course of professional training?

For example, in the training of teachers it would be practicable, if desirable, to have a certain amount of practice teaching done at the very start as a basis for the subsequent study of methods, theory, etc. An engineering student might be given practical employment in something of an apprentice capacity along practical lines. A prospective physician might serve as a hospital orderly, nurse, etc., before completing his training.

Problem 2. (Undifferentiated professions.) To what extent shall training for professions which are not as yet clearly differentiated presuppose as a basis a complete professional training along the lines of professional training already established?

In the field of agriculture, for example, professional field of "administration of agricultural plants," "rural engineer," "rural journalist," etc., seem to be in process of differentiating. In medicine there is a demand for specialists in such fields as optometry, school physician, etc. In the commercial occupations, certain fields of expert inquiry, statistical work, and salesmanship seem to be assuming the proportions and standards of professions. In industry we have as yet no systematic training for the positions of foreman, overseer, and the like, except in very few fields.

(*a*) At present it is often assumed that before one may take up professional training in these undifferentiated or "nascent" professions, it is necessary that he should have a complete professional training along the established lines. This process, however, is costly, and it is a question whether the resources of the community or of the individual trained are always equal to it. The question of necessity must also be considered. For example, the school nurse and school physician represent distinct demands to-day in specialized fields for which it is doubtful if the historic training of the nurse and of the physician are at all necessary prerequisites. The professions of rural engineer and rural journalist may, on the other hand, be of such a nature as to require not so much a large amount of technical training in agriculture, as maturity and a wide range of experience, before they are taken up.

(*b*) To some extent the problem involved is one of maturity and experience, rather than the purely technical training of the person embarking in such work. Most directive or managerial positions require maturity and experience. It is quite probable that in some of these professional lines the ultimate solution will be that the person will take a definite amount of practical training for the historic occupation itself, and will then enter upon some field of practice with a view to returning, later, for advanced study toward managerial or other related work. It has been proposed, for example, that a school for the preparation of superintendents and principals of schools should presuppose perhaps five years of experience as teacher before systematic study for the administrative work is begun.

V. PROBLEMS OF INDUSTRIAL EDUCATION.

Because of the highly differentiated character of the trades and industries, a series of problems arise in industrial education which have not yet appeared in other fields.

Problem 1. To what extent and under what conditions shall training be given for highly specialized occupations in manufacturing and other related callings where so-called "unskilled" or specialized service is in large demand?

For example, in the manufacture of cotton and woolen cloth, the number of specialized occupations is now nearly 100. Some of these require little or no special training, and may be adequately supplied by the labor of children or women. In shoemaking, it is said that the number of specialized operations for each of which individual workers are specialized, reaches several hundred. Similar tendencies toward differentiation and specialization of occupation are found in the food-packing industries, iron and steel working industries, small hardware and jewelry manufacturing, printing and publishing, the building trades, transportation, and even certain phases of agriculture, such as sugar production, wheat-growing, etc. The building up of department stores, large jobbing houses, etc., in commerce increases also in a large degree specialization in salesmanship and clerical service.

(*a*) There is no evidence that the tendency toward extreme differentiation and specialization in occupational fields will be stayed. In proportion as economic units of production and exchange enlarge, supervision becomes more efficient, and mechanical devices are invented and improved, so, it would appear, in almost all occupational fields specialization and the relatively large employment of unskilled service seems to increase. The persistency of this tendency will depend upon the economic advantages resulting from such specialization.

(*b*) On the other hand, from the standpoint of the individual worker, serious questions as yet uninvestigated arise as to the psychological, moral, and physical effects of extremely specialized occupation. A large part of personal growth in character, physical powers, and probably also in mental capacity has always been dependent upon the occupation followed. Early specialization may result in a complete arrest of development in these lines.

It is probable, however, that specialization of occupation for one whose physical growth has been completed is much less dangerous than for one still plastic. Hence, while extreme specialization for a worker at 15 years of age may give bad results, the same may not at all be true if the occupation is entered upon at the age of 22 or 23. This represents a promising field for further inquiry and investigation.

(*c*) In the meantime there are good grounds for urging that all persons be given an opportunity for systematic vocational education, either in some trade requiring various operations, or over a series of the special operations found in a highly specialized manufacturing or other economic process.

Problem 2. To what extent and under what conditions can training for foremanship be organized and conducted?

In almost all fields of organized industry the post of foreman, overseer, or other special director of groups of workers is clearly recognized. Such posts commonly require (1) the degree of expert knowledge of the occupation which a skilled worker is supposed to possess; and also (2) qualities not easily described, but related to leadership, capacity to direct workers, knowledge of human nature, organizing ability, etc.

(*a*) Foremen must combine, of necessity, native ability with a high degree of training; hence almost invariably these must be selected men who have had considerable experience.

(*b*) Experience does not suggest that industrial schools can train foremen, as such, economically. Young people from 14 to 20 years of age can hardly be selected with reference to their native ability to serve as foremen. Hence, training in the special lines of knowledge required for foremanship would be largely wasted. On the other hand, when skilled workmen are selected after several years of experience for positions of foremanship they often find themselves handicapped for lack of the technical knowledge which foremen should have.

(*c*) Probably the need should be met by (1) a systematic course, offered to all alike, toward the occupational pursuit itself, followed by (2) opportunities at evening schools and short courses for workers who have had a few years' experience in the industry, further to qualify themselves if they desire.

Problem 3. To what extent shall prolonged courses of industrial training be offered to girls in industrial and other occupational fields, who, in the main, will spend but from four to seven years in the occupation, after which they will take up home making?

The census of the United States shows that at the present time there are employed in this country a very considerable number of girls from 14 to 20 years of age. It is well known that the large majority, probably at least 90 per cent of these in the wage-earning callings, will take up homemaking as a career between the ages of 20 and 27 years. The problem of the industrial training of these, therefore, involves, on the one hand, comparatively short courses of training, and, on the other, courses which will produce the maximum degree of efficiency in early stages.

Problem 4. Are there callings in industrial fields intermediate between those of a strictly professional nature, such as engineering, and those of a strictly trade nature, for which a large degree of technical instruction, as distinguished from practical training, is desirable?

It is sometimes alleged that there are such technical fields, for which, for example, the technical training offered in some of our high schools might be suited. Draftsmanship is sometimes alleged as an example, while in other fields such occupations as assaying, computing, and the like, may serve as examples. No sufficient anaylsis of these possibilities has yet been made.

Problem 5. What, at any given stage of vocational training for the industrial occupations, should be the proportion of time and energy of the pupil given, respectively, to technical instruction and to practical training?

Extreme and opposed examples of the problem under consideration are the following: (1) In the making of the machinist, a boy beginning at the age of 14 might devote his first two years very largely to such technical studies as drawing, mathematics, mechanics, and shop exercises, together with shopwork and shop English, and on the other hand give a minimum amount of attention to productive shopwork of a thoroughly practical nature. Between his sixteenth and eighteenth years the proportion of time given to his shopwork might be very greatly increased, with a diminution of the amount of attention given to technical work.

On the other hand, a program of training might be devised by which during the first year he might give from 60 to 80 per cent of his time to productive shopwork, with relatively only a small amount of technical instruction related to it. In his later years the proportion of time given to shopwork might be diminished, and the proportion of time given to technical instruction might be greatly increased.

The problem involved is not one merely for a given individual, but one which shall meet the requirements of the largest proportion of individuals as these present themselves for training. The first program might be the best for the person, if he could be found, who possesses inherent qualifications for foremanship; but it might prove exceedingly wasteful for that large majority of prospective workers in iron and steel who have little capacity for abstract thinking. The second program might prove much the better for the so-called "concrete-minded" people, and might also prove most effective for those who were capable of surviving four or more years of training as given.

VI. PROBLEMS OF COMMERCIAL EDUCATION.

The chief problems found in commercial education at the present time, apart from those involving its relationship to general education, are found in connection with the unanalyzed character of the occupations, from the standpoint of programs of commercial training.

Problem 1. To what extent should commercial occupations other than those of (*a*) accountancy and bookkeeping, (*b*) stenography and typewriting, be differentiated from the purpose of vocational education?

Statistics show clearly that in the commercial world approximately 80 per cent of the workers are found in fields of salesmanship, etc., as against 20 per cent in the specialized fields of accountancy, and stenography and typewriting. For the former occupations, however, little or no systematic vocational education is yet offered, in the main because requirements of these occupations that might be met by school vocational training have not been defined.

VII. PROBLEMS OF HOMEMAKING EDUCATION.

The two chief problems connected with homemaking education at the present time are (*a*) those connected with the more effective coordination of that education with the home activities of the pupils and (*b*) those connected with the age at which it is efficiently practicable to begin systematic vocational homemaking education.

Problem 1. To what extent and under what conditions in a program of systematic vocational homemaking education can cooperation with the home be secured, and the equipment and facilities of the home be utilized for purposes of practical training?

(*a*) Every girl seeking a homemaking education must either live at home, in a school dormitory, or under other conditions involving a close contact with the various operations for which she is being trained. An efficient program of vocational homemaking education will involve the extensive use of the facilities thus offered.

(*b*) The problem presents different aspects, according as the vocational day school or the vocational evening school is under consideration. The principle is the same in both cases, however.

Problem 2. At what age is efficient homemaking education most practicable?

It is quite probable that there must be differentiation of groups for homemaking education, according to age as affected by the occupations followed. For example, it may be doubted whether girls who from 14 to 21 years of age will be wage earners in occupations not related to the home, and who will be either living at home as boarders or in boarding houses, can efficiently respond to vocational homemaking education until somewhat late in their wage-earning careers. Again, when conditions of caste shall have been so changed that home employment on a wage basis shall be attractive, systematic vocational education for this might well be begun at 14 or 15 years of age. In the case of girls not contemplating wage-earning careers, but who design to remain at home, systematic vocational education might well take place during the high-school period.

VIII. PROBLEMS OF AGRICULTURAL EDUCATION.

Some examples now exist of successful programs of agricultural vocational education wherein the home farm is successfully combined with the school for instruction and for the direction of practical work. The two problems at present most pressing are (1) the provision of opportunities for practical training for city boys, and (2) the problem of combining secondary vocational agricultural education with preparation for higher institutions for the study of agriculture.

Problem 1. Under what conditions can boys living under urban conditions be provided with facilities for that portion of vocational agricultural education connected with practical work?

Experiments are being made in the direction of renting vacant land adjacent to cities for this purpose and putting boys in charge of their work on a project basis.

Problem 2. To what extent is it practicable for boys in the course of receiving a vocational agricultural education properly to qualify themselves for an agricultural college?

Obviously the requirements of an efficient vocational agricultural education are defined by the conditions of successful farming. It is not yet clear as to what should constitute the minimum requirements for admission to the agricultural college. Probably the college should distinguish in its work between degree work and courses of agriculture of a practical nature.

IX. PROBLEMS OF THE ADMINISTRATION OF VOCATIONAL EDUCATION.

The effectiveness of any form of vocational education depends largely upon the degree to which those directing it comprehend and respond to the practical requirements of the occupations for which training is being given. There arise, therefore, (*a*) problems as to obtaining teachers who have had experience in the occupation for which training is being given; (*b*) problems of keeping these teachers in intimate contact with the practical requirements of these occupations; (*c*) problems of maintaining or providing, in connection with the executive authority in charge of the schools, specialists in vocational education; and (*d*) problems of providing, either in the legislative authority in charge of the schools or in an advisory relationship, representatives of the fields for which training is being given.

Problem 1. To what extent and under what conditions can teachers in vocational departments be equipped with practical experience obtained through actual participation in the callings for which they are giving education?

(*a*) Experience seems to prove that effective vocational education can only be given by persons who have had sufficient experience in a practical capacity, in a particular occupation, to enable them to succeed on a commercial basis.

For example, where normal schools undertake to train teachers for successful teaching (and not merely to teach prospective teachers certain subjects of study) experience seems to show that such teachers must themselves have been successful in the field of practical work. In medical colleges it is rare to find successful teachers who have not been commercially successful in practice. The best engineering teachers are those who have served some years at commercial work. In such trades as plumbing, pattern making, and others it is now agreed that a successful teacher must himself have reached a stage where he could readily procure profitable employment. The situation is not clear as regards commercial and agricultural teachers, but doubtless the same principles apply in these fields, as well as in homemaking.

(*b*) Granting the necessity of a considerable amount of practical experience on the part of teachers, the following are methods by which it could be obtained in conjunction with suitable training in the art of teaching: Vocational schools might take as teachers only persons who have already demonstrated their capacity in the world of practical effort, giving them in greater or less degree, just prior to their entrance on teaching, such training in the art of teaching as is practicable.

This method has been followed in the past by medical colleges, theological schools, and to some extent, engineering colleges and law schools. It is now followed by trade schools, and to a small extent, by schools of agriculture.

(*c*) A person seeking to become a teacher in a vocational field might take pedagogical courses, followed by a certain amount of practical experience as a prerequisite before taking up teaching.

This is the prevailing method in normal schools and in some engineering schools.

(*d*) A course of training might be devised whereby the prospective teacher would first take a course in a school looking toward teaching, followed by one or more years of practical participation in commercial work, this to be succeeded by a definite period of study of the art of teaching, preliminary to taking a teaching position. This method is now being proposed as a basis for the training of teachers of commercial subjects, etc.

Problem 2. To what extent and by what means shall teachers in vocational schools be required to keep in close contact with the occupational fields for which they are giving training?

It is probable that in fields like industry and agriculture and others where changes are taking place efficiency can be produced only by strongly requiring that teachers shall not only observe but actually participate, on a commercial basis, from time to time in the work in fields in which they are giving training. The most available means to this end would be periods of leave given from the school, during which teachers would participate in such work. This is now found in some engineering fields.

Problem 3. To what extent and by what means shall specialized direction be provided in the executive administration of vocational education?

(*a*) The problem is one affecting (1) the headship of a department; (2) the directorship of a vocational school; (3) the general supervision of vocational education in an administrative unit, such as a town or city; and (4) the administrative supervision of vocational education on behalf of the State, or other large unit of administration.

(*b*) It is assumed that the headship of a department must be in the hands of one who is a specialist himself in the occupation for which training is being given.

(*c*) The directorship of a large vocational school having several departments will probably not be in the hands of a specialist in any one department, but rather in the hands of one who is a pedagogical expert in many lines and a good administrator. Eventually, such a position will probably be filled by promotion from headships of departments, such selection being made on the basis of natural ability for an administrative position.

(*d*) There are good grounds for believing that in each city, or other administrative unit having many vocational schools, there should be an assistant superintendent specializing in the field of vocational education, including thereunder industrial, commercial, homemaking, and agricultural work offered, but not including professional. Whether he should also have supervision of the practical arts work as a phase of general education or when offered prevocationally is doubtful.

(*e*) Similarly, where the administration of vocational education is supervised on behalf of the State there should be organized a separate department, dealing exclusively with vocational education.

Problem 4. To what extent and under what conditions shall representatives of the various vocational fields participate in the lay administration of vocational schools?

(*a*) It should be assumed that every single vocational department in a system should feel the influence of representatives of laymen in the occupational field concerned (including both employers and employees, where these distinctions are clearly defined).

(*b*) Obviously, it is impracticable to include laymen in this capacity in the school committee or board itself without making the latter unduly large. It may be assumed that a layman from one occupational field has no more capacity to assist in the administration of vocational education in another than any other layman.

(*c*) Experience seems to demonstrate that the more effective course is to place all vocational schools under the administration of the regularly constituted school authorities, because these are supported by public money, and to provide for each distinctive department a small advisory committee for the activity of which the department head shall be primarily responsible.

APPENDIX.

DIGEST OF LAWS OF STATES THAT PROVIDE STATE AID FOR A MORE OR LESS STATE-WIDE SYSTEM OF VOCATIONAL EDUCATION.

INDIANA.

1. *Units of organization* are cities, towns, and townships.
2. *Types* are separate schools, regular day schools, part-time day, and evening schools or classes.
3. *Compulsory education* in part-time day schools, ages 14 to 16, 5 hours per week. But only when local communities have first established the school. The education is not compulsory upon all, as is the case in Wisconsin.
4. *Approved* by State board of education.
5. *Restricted* to such courses in part-time schools as are supplementary to regular employment.
6. *Established and maintained* by regular school authorities.
7. *Local board of inspection* is appointed by school board, ratified by State board of education. Three members suggested for each separate vocation taught.
8. *State reimburses* local communities maintaining regular day, part-time, and evening vocational schools and classes to the extent of two-thirds of net cost of maintenance, less tuition collected.
9. *State reimburses* local communities to extent of one-half amount expended for tuition.
10. *Age limits* are, for regular day and part-time day schools, 14 to 25.

MAINE.

1. *State aids* elementary schools teaching manual training and domestic science to the extent of two-thirds of the teacher's salary, not to exceed $800 for each teacher.
2. *Approved* by superintendent of public instruction.
3. *State aids* secondary schools providing instruction in agriculture, domestic science, and mechanic arts to the extent of two-thirds of cost of instruction, but not to exceed $500 to any district for any one year.
4. *State aids* certain selected vocational schools teaching agriculture, domestic science, manual arts and trades, to the extent of two-thirds of the cost of instruction, but not exceeding $2,000 for any one district.

MASSACHUSETTS.

1. *Units of organization* are counties, cities, and townships.
2. *Types* are regular day, part-time day, and evening schools or classes.
3. *Compulsory education* in part-time day schools, ages 14 to 16, 5 hours per week. But only when local communities have first established the school. The education is not compulsory upon all, as is the case in Wisconsin.

4. *Approved* by State board of education.
5. *Restricted* to such courses in part-time schools as are supplementary to regular employment. Exception: Vocational courses for women in evening classes do not have to be supplementary to regular employment.
6. *Established and maintained* by regular school authorities or by *independent boards.*
7. *Local board of inspection* is appointed by school board and ratified by State board of education. Three members suggested for each separate vocation taught.
8. *State reimburses* local communities maintaining regular day, part-time, and evening vocational schools and classes to the extent of (*a*) one-half net cost of maintenance less tuition collected, (*b*) two-thirds net cost of maintenance for vocational courses in regular high schools maintaining agricultural courses.
9. *State reimburses* local communities to extent of one-half of amount expended for tuition.
10. *Age limits* are, for regular day and part-time day schools, 14 to 25 years; for evening schools, 17 or over.

NEW JERSEY.

1. *Units of organization* are county, joint county, districts, or union of districts.
2. *Types* are regular day, part-time day, and evening schools or classes.
3. *Not compulsory.*
4. *Approved* by State board of education.
5. *Restricted* to such courses in part-time schools as are supplementary to regular employment. Exception: Vocational courses for women in evening classes do not have to be supplementary to regular employment.
6. *Established and maintained* by regular school authorities.
7. *No local boards of inspection.*
8. *State reimburses* local communities maintaining regular day, part-time, and evening vocational schools or classes to the extent of one-half of net cost of maintenance, but not to exceed $10,000 for any district, county, or joint district.
9. *Tuition reimbursed* to local communities to extent of $25 through another act.
10. *No age limitation.*

NEW YORK.

1. *Units of organization* are cities and districts.
2. *Types* are regular day, part-time day, and evening schools or classes.
3. *Not compulsory.*
4. *Approved* by commissioner of education.
5. *Not restricted.* (See (5) other States.)
6. *Established and maintained* by regular school authorities.
7. *Local boards of inspection* are appointed by school board and ratified by State board of education. Two members suggested for each separate vocation taught.
8. *State reimburses* local communities maintaining regular day, part-time, and evening vocational schools and classes to the extent of (*a*) one-half of net cost first teacher, not to exceed $1,000; (*b*) one-third of salary of all additional teachers. Provision is made for a pro rata distribution of part-time teachers in evening, part-time, or other schools.

9. *State reimburses* local communities through high-school act for tuition expended.
10. *No age limitations.*
11. Minimum of 15 pupils required for formation of class.

PENNSYLVANIA.

1. *Units of organization* are districts or joint districts.
2. *Types* are regular day, part-time day, and evening schools or classes.
3. *Not compulsory.*
4. *Approved* by State board of education.
5. *Restricted* to such courses in part-time schools as are supplementary to regular employment. Exception: Vocational courses for women in evening classes do not have to be supplementary to regular employment.
6. *Established and maintained* by regular school authorities.
7. *Local board of inspection* is appointed by school board and ratified by State board of education.
8. *State reimburses* local communities maintaining regular day, part-time, and evening vocational schools and classes to the extent of two-thirds of cost of instruction, not to exceed $5,000 in any one district for any one year.
9. *State reimburses* local communities for tuition to extent of $25 per child through other act.
10. *No age limitations.*

WISCONSIN.[1]

1. *Units of organization* are school districts.
2. *Types* are all-day, part-day, and evening schools or classes.
3. *Compulsory education* in part-time day, ages 14 to 16, 5 hours per week.
4. *Approved* by the State board of industrial education, consisting of 9 members—3 employees, 3 employers, and 3 educators.
5. *All cities with 5,000 or more inhabitants* required to provide boards for industrial education; these boards to be appointed by the local boards of education, and to consist of 6 members—2 employees, 2 employers, the superintendent of schools, and the high-school principal.
6. *State aid provided* for four types—industrial, commercial, continuation, and evening schools.
7. *State reimburses* local communities maintaining above types to the extent of one-half expense of instruction, up to $3,000 for each school maintaining all four types, but not to exceed $10,000 to any one community.
8. *Employers must pay wages* to "permit pupils" for the five hours spent in continuation schools.

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[1] The Wisconsin laws covering this topic were not available, so this digest was gleaned from various secondary sources.

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NOTE.

The present issue of this record follows immediately that for May, 1916, publication having ceased during June, July, and August.

This office can not supply the publications listed in this bulletin, other than those expressly designated as publications of the Bureau of Education. Books, pamphlets, and periodicals here mentioned may ordinarily be obtained from their respective publishers, either directly or through a dealer, or, in the case of an association publication, from the secretary of the issuing organization. Many of them are available for consultation in various public and institutional libraries.

Publications intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

PUBLICATIONS OF ASSOCIATIONS.

759. **Association of colleges and preparatory schools of the Middle states and Maryland.** Proceedings of the twenty-ninth annual convention, Philadelphia, Pa., November 26–27, 1915. Published by the Association, 1916. 108 p. 8°. (George W. McClelland, secretary, University of Pennsylvania, Philadelphia, Pa.)

Contains: 1. Isaac Sharpless: Military training in schools and colleges, p. 10–18; Discussion, p. 19–29. 2. Athletics in schools and colleges [by] D. A. Sargent, p. 30–41; [by] Walter Camp, p. 41–47; [by] J. E. Raycroft, p. 47–54; Discussion, p. 54–58. 3. R. B. Merriman: The use of the comprehensive examination in college education, p. 59–66; Discussion, p. 66–71. 4. Report of the committee appointed to investigate the comparative records made by students admitted to college on examination and on certificate, respectively, p. 75–94. 5. Bibliography: College admission: Examination vs. certificate system, p. 95–97.

760. **Association of colleges and secondary schools of the Southern states.** Proceedings of the twenty-first annual meeting . . . Nashville, Tenn., October 28, 29, 1915. 84 p. 8°. (Walter Hullihen, secretary, University of the South, Sewanee, Tenn.)

Contains: 1. S. P. Capen: Measuring college standards and efficiency, p. 36-39. 2. Emily H. Dutton: Measuring college standards and efficiency, p. 40-51. 3. J. D. Elliff: The junior college: the Missouri plan, p. 52-54. 4. H. C. Tolman: Quality credits, p. 55-61. 5. L. R. Wilson: Southern high school libraries, p. 62-68. 6. C. G. Maphis: A plan for the definite rating of secondary schools, p. 69-73. 7. W. H. Hand: College credit for school work, p. 74-80.

761. **Carnegie foundation for the advancement of teaching.** Tenth annual report of the president and of the treasurer. New York City, 1915. 141 p. 4°. (Clyde Furst, secretary, 576 Fifth avenue, New York City.)

Contains: 1. The study of legal education, p. 21-30. 2. College charges for tuition, p. 38-45. 3. Pensions for public school teachers, p. 49-63. 4. Tabular statement of teachers' pension systems, p. 86-99. 5. Summary of teachers' pension systems, p. 100-102.

762. **Illinois state teachers' association.** Journal of proceedings of the sixty-second annual meeting . . . held at Springfield, Illinois, December 28-30, 1915. 189 p. 8°. (Robert C. Moore, secretary, Carlinville, Ill.)

Contains: 1. W. C. Bagley: The educational basis of democracy, p. 57-61. 2. W. S. Athearn: The religious education of a democracy, p. 61-63. 3. J. A. Clement: Survey report on student population and problems in Illinois high schools, p. 73-81 4. Means and methods of classroom supervision [by] G. W. Gaylor, p. 103-5; [by] S. K. McDowell, p. 105-8; [by] L. A. Mahoney, p. 108-11; [by] J. O. Engleman, p. 111-15. 5. C. H. Johnston: Junior high school administration, p. 116-23. 6. D. M. Inman: The rural community as a subject of study, p. 135-41. 7. A. R. Warnock: The college athlete and summer baseball. p. 143-46 8. B. D. Remy: Biography for religious instruction, p. 154-56. 9. L. P. Frohardt: State plans for religious instruction, p. 156-59. 10 R. V. Morgan: High-school music, p. 164-67.

763. **Iowa state teachers' association** Proceedings of the sixty-first annual session . . . held at Des Moines, Iowa, November 4-6, 1915. Des Moines, R. Henderson, 1915. 209 p. 8°. (O. E. Smith, secretary, Indianola, Iowa.)

Contains: 1. H. B. Smith: The rural school, p. 5-10. 2. A. M. Deyoe: Educational needs and tendencies in Iowa, p. 11-21. 3. [Report of the committee on the elimination of obsolete and useless topics and materials from the common school branches] p. 23-73. 4. A. E. Craig: The college and its critics, p. 104-8. 5. G. S. Ford: Methods of socializing history, p. 115-24. 6. R. H. Whitbeck: The teaching of domestic geography, p. 126-32. 7. J. L. Cherney: Supervision of instructions, p. 132-37.

764. **National education association.** [Addresses delivered at the New York meeting, July 1916] School and society, 4 : July 8, 15, 22, 29, August 5, 12, 1916.

Contains: 1. D. B. Johnson: The rural home and the farm woman, p. 39-42. 2. Ella F. Young: The secular free schools, p. 77-81. 3. C. R. Van Hise: The place of a university in a democracy, p. 81-86. 4. W. J. Bryan: Citizenship in a republic, p. 86-88. 5. W. G. McAdoo: Some international aspects of public education, p. 88-93. 6. G. S. Hall: The war and some of its relations to education, p. 115-20. 7. C. G. Pearse: The common school as an instrument of democracy, p. 120-23. 8. J. R. Kirk: The place of the normal school in a democracy, p. 123-27. 9. Samuel Gompers: The American school and the working man, p. 127-33. 10. Joseph Swain: Salaries and pensions, p. 135-54. 11. Clyde Furst: Teachers' pensions, p. 154-59. 12. J. D. Shoop: Vocational education, p. 165-68 13. V. K. W. Koo: Chinese education, p. 191-94. 14. Fannie F. Andrews: What the public schools can do toward the maintenance of permanent peace, p. 194-97. 15. S. P. Duggan: Present tendencies in college administration, p. 229-35. 16. Beatrice Winser: Functions and methods of boards of education, p. 235-38. 17. H. H. Seerley: National aid to vocational education, p. 238-42.

For a synopsis of the meeting and brief extracts from some of the addresses, see Journal of education, 84 : 61-69, 73-77, 87-97, 102-104, July 20, 27, 1916.

765. **New Jersey state teachers' association.** Annual report and proceedings of the 61st annual meeting . . . Atlantic City, N. J., December 27-29, 1915. Trenton, N. J., MacCrellish & Quigley co., 1916. 210 p. 8°. (H. J. Neal, secretary, Phillipsburg, N. J.)

Contains: 1. F. P. Graves: The evolution of educational method, p. 16-17. 2. J. G. Hibben: Sources of power, p. 18-24. 3. J. J. Savitz: Growth through supervision, p. 25-31. 4. Myra I. Billings: Supervision from the standpoint of the teacher, p. 31-34. 5. A. B. Meredith: Scientific measuring and testing of pupils, p. 35-38. 6. Z. E. Scott: How can the quality of supervision be determined? p. 40-45. 7. Fannie F. Andrews: The teacher and the world crisis, p. 47-51. 8. Mary E. Hall: The school and the library, p. 61-66. 9. Louise Connolly: The school and the library, p. 67-70. 10. Sarah B. Askew: Story-telling and its relation to library and school, p. 71-75.

766. **North Carolina teachers' assembly.** Proceedings and addresses of the thirty-second annual session . . . Raleigh, November 24-26, 1915. Raleigh, Edwards & Broughton printing co., 1916. 347 p. 8°. (F. E. Sams, secretary-treasurer, Raleigh, N. C.)

Contains: 1. Mary O. Graham: The efficient school, p. 58-64. 2. Jessie Field: Leadership in the country, p. 64-68. 3. David Snedden: New problems in education, p. 68-70. 4. Anna Brochhausen: Story telling, p. 71-74. 5. Leila Cobb: The standards for measuring the efficiency of the primary teacher, p. 80-84. 6. R. E. Sentelle: An act for a uniform plan of examination and certification of teachers, p. 121-29. 7. Mrs. M. B. Terrell: The efficient teacher, p. 151-58. 8. J. H. Beach: The organization and management of the small high school, p. 159-68. 9. David Snedden: New problems in secondary education, p. 189-96. 10. T. E. Hollenbeck: The probable results of developing high schools that prepare directly for local industries, p. 202-204. 11. Frances Ray: The value of home economics in our schools, p. 205-11. 12. N. W. Walker: The present status of the high school sciences in North Carolina, p. 212-26. 13. C. M. Hutchings: The elective system in our high schools, p. 229-40. 14. H. S. Shaw: How can the boys be retained in our high schools? p. 241-44. 15. A. E. Winship: Music in public schools, p. 257-66. 16. R. H. Latham: The Gary schools: What lessons do they hold for the city schools of North Carolina? p. 277-85. 17. T. W. Andrews: Citizenship and play, p. 285-91. 18. E. C. Brooks: By what standard may a school board know the efficiency of the superintendent? p. 291-94. 19. N. W. Walker: The growth of farm-life schools, p. 310-16.

767. **North Dakota education association.** Proceedings twenty-ninth annual session . . . held at Grand Forks, November 3, 4 and 5, 1915. Fargo, N.D., Walker bros. & Hardy [1916] 215 p. 8°. (W. E. Parsons, secretary, Bismarck, N. D.)

Contains: 1. A. G. Crane: Efficiency of schools, p. 27-34. 2. L. D. Coffman: Tradition and reform in education, p. 35-37. 3. W. F. Clarke: The obligations of the higher to the lower education, p. 41-47. 4. R. M. Black: Recent educational legislation in North Dakota, p. 48-52. 5. R. L. Finney: Social science in secondary schools, p. 56-61. 6. Effective methods of correlating high school work with every day life, p. 62-66. 7. Mrs. L. O. Middleton: Teaching of temperance hygiene, or the key to the situation, p. 72-77. 8. Clara M. Struble: The teachers' insurance and retirement law, p. 78-82. 9. R. A. Hatherell: School gardening, p. 83-88. 10. Frances Cowan: Playground possibilities, p. 94-97. 11. H. J. Hughes: The relationship of the common school to the college, p. 102-4. 12. J. E. Switzer: Methods and material in teaching physiography, p. 116-18. 13. P. H. Lehman: Shall we teach peace or war? p. 122-23. 14. W. H. Greenleaf: The relation of local history to the teaching of national history, p. 126-31. 15. V. E. Sayre: The adapting of manual training to rural conditions, p. 138-42. 16. M. C. James: Some ideals in secondary agriculture, p. 142-49. 17. Jean Porterfield: High school dramatics, p. 155-59. 18. F. H. Koch: A message from the committee on the improvement of American speech, p. 159-62. 19. C. C. Schmidt: The supervision of small school systems, p. 168-74. 20. F. L. Rairdon: Differentiation in thec ourses of study for the grades, p. 179-82.

768. **Ohio state teachers' association.** Proceedings . . . sixty-ninth annual session, Cedar Point, Ohio, June 27-29, 1916. Ohio educational monthly, 65 : 340-58, August 1916.

Contains: 1. R. L. Ervin: Every public school system should provide systematic and definite vocational training for its pupils in lines other than (in addition to) those that are clerical, commercial and secretarial, p. 347-55. 2. Wilson Hawkins: The six-six plan, p. 355-63. 3. U. L. Light: Resolved, that pupils should be allowed free election of studies in all grades above the sixth, p. 363-68. 4. R. W. Solomon: Departmental teaching should be deferred to the beginning of the tenth year, p. 369-75. 5. W. C. Bagley: Red letter lessons, p. 387-90. 6. The junior high school, p. 390-97. 7. Is it the function of the public school to be the social center of its community? p. 397-402. 8. Joint discussion: Systematic military training should be included in the courses of study required of all boys in all schools, above grammar grades, supported wholly or in part, by public funds, p. 403-8.

769. **Pennsylvania state educational association. Department of city and borough superintendents.** Proceedings, thirty-sixth annual session, Scranton, December 28, 1915. Pennsylvania school journal, 64 : 437-60, April 1916.

Contains: 1. J. M. Howerth: Vocational guidance, p. 437-40. 2. S. E. Downes: Transportation and efficiency, p. 441-42. 3. J. M. Howerth: Caring for delinquents, p. 442-44. 4. P. M. Harbold: The grading of teachers, p. 445-48. 5. Landis Tanger: The grading of teachers as related to the improvement of teachers, p. 448-51. 6. H. P. Updegraff: Uniform records and reports, p. 451-56. 7. J. L. Eisenberg: Duties of the executive of school system, p. 456-58.

770. **South Dakota educational association.** Proceedings of the thirty-third annual session . . . held at Aberdeen, November 22-24, 1915. 479 p. 8°. (A. H. Seymour, corresponding secretary, Aberdeen, S. D.)

Contains: 1. W. F. Jones: Economy of time in education, p. 43-52. 2. E. C. Elliott: Measures of the worth of teachers, p. 55-62. 3. C. H. Lugg: Annual address of state superintendent of public instruction [Rural schools] p. 63-70. 4. E. C. Perisho: The vocational aspect of our problem of economy, p. 78-86. 5. H. M. Gage: Elimination of relatively useless material from the college curriculum, p. 105-13. 6. J. B. Heinmiller: Vocational guidance, p. 115-22. 7. A. M. Brace: The place of the newspaper and the news story in high school courses in English composition, p. 128-33. 8. J. T. Glenn: That same old problem, school legislation, p. 134-40. 9. Mrs. F. C. Huss: Preparation versus cramming for seventh and eighth grade examinations, p. 171-75. 10. Alta V. Brown: The teacher as a trainer, p. 176-80. 11. L. A. Fell: President's address [School hygiene] p. 205-10. 12. C. R. Goff: Our obstacles and how we may overcome them, p. 211-17. 13. T. A. Harmon: Wasted time —pupil, teacher and school board, p. 221-29. 14. H. C. Johnson: Vocational guidance, p. 230-34. 15. E. H. Warren: What we want and what we get, p. 235-44. 16. Herbert Patterson: Educational principles and the elementary school, p. 268-77. 17. Lida Williams: Play—purpose and practice, p. 278-85. 18. Miss Laurson: Teaching the pupils of the schools how to use the library, p. 320-24. 19. Nola Fromme: Home economics the meeting ground of the home and the school, p. 356-63.

771. **West Virginia education association.** Proceedings of the forty-fifth annual session . . . held in Charleston, W. Va., June 1915. Keyser, W. Va., The Mountain Echo, 1916. 300 p. 8°. (A. P. Morrison, secretary, Clarksburg, W. Va.)

Contains: 1. L. L. Friend: What can we do for those who drop out of school? p. 33-41. 2. W. M. Foulk: What should the community expect of the public schools? p. 42-49. 3. C. S. Crow: Cooperation between the school and community in cultivating an appreciation of literature, music and art, p. 50-56. 4. H. R. Bonner: Cooperation between the school and the shop or the office in vocational education, p. 56-70. 5. C. R. Murray: Newspapers, periodicals and theatres as educational agencies, p. 75-81. 6. W. S. Deffenbaugh: A wider use of the school plant, p. 81-102. 7. R. S. Gatherum: Civic education of the miner, p. 115-19. 8. B. H. Williams: What should the high school and the community expect of each other in the matter of co-operation, p. 122-26. 9. Mary R. M. McGuigan: Co-operative realizations and anticipations of our high schools with reference to the community, p. 129-34. 10. H. R. Bonner: Co-operation of the high school and the community through vocational guidance, p. 134-44. 11. C. L. Wright: The school and the community co-operating in the study and teaching of history and civics, p. 144-52. 12. J. A. French: The district supervisor as leader in managing the business affairs, p. 172-79. 13. E. B. Whaley: Athletics in the rural districts, p. 183-87. 14. Nell M. Barnett: Home economics in rural schools, p. 191-96. 15. S. S. Jacob: The teaching of manual training in rural schools, p. 196-203. 16. J. G. B. Coberly: Widening the scope of the school's influence, p. 211-15. 17. J. C. Timberman: The school and the community co-operating home gardens, p. 217-21. 18. W. W. Trent: Health work in the community, p. 227-34. 19. Ina G. Barnes: Class room method as a factor in community co-operation, p. 255-59.

772. **Wisconsin teachers' association.** Proceedings of the sixty-third annual session . . . held at Milwaukee, November 4-6, 1915. Madison, Wis., Cantwell printing company, state printer, 1916. 306 p. 8°. (M. A. Bussewitz, secretary, Milwaukee, Wis.)

Contains: 1. B. E. Nelson: A decade of educational progress in Wisconsin, p. 16-21. 2. J. W. Hudson: Democracy and education, p. 22-26. 3. Cora W. Stewart: Moonlight schools in Kentucky, p. 26-36. 4. H. W. Shryock: Education and peace, p. 37-46. 5. W. N. Ferris: Sanity in education, p. 46-55. 6. J. L. Elliott: Moral education, p. 55-61. 7. Ella L. Cabot: Moral teaching in schools, p. 64-73. 8. L. R. Gignilliat: Utilizing the military system for moral development, p. 73-81. 9. C. W. Wassam: Practical commercial geography, p. 116-20. 10. J. D. Shoop: The six and six organization of schools, p. 120-23. 11. J. D. Hudson: The high school and the community, p. 123-26. 12. H. M. Kurtzworth: Educational possibilities of the school publication, p. 161-66. 13. F. H. Gurtler: The training of stenographers, p. 183-88. 14. H. H. Hering: What should we teach in commercial arithmetic? p. 188-96. 15. R. S. Butler: Teaching the active end of business, p. 196-202. 16. Frederik Meyer: Expedients and supplementary reading in German in upper grades, p. 229-33. 17. C. H. Mills: Standardization [in music education] p. 253-60. 18. W. O. Miessner: A definite high school music course, p. 265-68. 19. S. D. Blanton: Incidence, cause and treatment of speech defects among school children, p. 273-84. 20. Margaret Wilson: America's opportunity—every schoolhouse a community center, p. 295-300.

EDUCATIONAL HISTORY AND BIOGRAPHY.

773. **Chancellor, William E.** Jesus as an educator. School journal, n. s. 1 : 13-15, July 6, 1916.

"This is the second of a series of ten articles upon 'Jesus as an educator,' of which the first appeared in our issue of June 22. The purpose of the series is to show Jesus as the ideal teacher to whom all other teachers of all grades and kinds and subjects should look for light and direction."

774. **Decorme, Gerardo.** Catholic education in Mexico (1525-1912). Catholic historical review, 2 : 168-81, July 1916.

775. **Garrone, Tomás L.** La obra cultural del Dr. Zubiaur (sinopsis) a los sesenta años de edad y cuarenta de educador. Buenos Aires, Impr. "Damiano," 1916. 119 p. front. (port.) 8°.

"Lista completa de las obras publicadas por el Dr. Zubiaur": p. 115-117.

776. In memory of Robert Curtis Ogden—true friend, patriotic citizen, unofficial statesman, Christian gentleman. Privately published, 1916. 55 p. illus., ports. 12°. Copyright by H. E. Fries. Preface by J. Y. Joyner.

Contains tributes to Mr. Ogden by prominent Southerners, including Commissioner P. P. Claxton.

777. **More, Paul E.** The old education and the new. Nation, 102 : 694-96, June 29, 1916.

A review of the educational labors of Henry Augustus Coit, first rector of St. Paul's school, Concord, N. H.

778. **Reville, John C.** De la Salle and popular education. America, 15 : 289-90, July 1, 1916.

779. **Stark, Herbert A.** Vernacular education in Bengal from 1813 to 1912. Calcutta review, no. 283: 25-75; no. 284 : 136-190, January, April 1916.

Contains chapters 1 to 5 of an elaborate work on native education in Bengal, India. To be continued.

780. **Visconti, Luigi.** La dottrina educativa di G. A. Fichte e i discorsi alla nazione tedesca. Firenze, B. Seeber, 1916. 118 p. 12°.

Bibliografia: p. [107]-110.

CURRENT EDUCATIONAL CONDITIONS.

781. **Bagley, W. C.** Some handicaps to education in a democracy. School and society, 3 : 807-16, June 3, 1916.

A paper read at a meeting of the Harvard teachers' association, Boston, March 11, 1916.

782. **Benson, Arthur C.** Education after the war. Nineteenth century, 79 : 1291-1306, June 1916.

"The problem must be to provide for special aptitude, and yet to retain a corrective; for scientific education must not lose sight of the human factor, humanistic education must not drift out of sight of facts."

783. **Bonner, Mary G.** What parents think of the Gary educational system. Outlook, 113 : 723-26, July 26, 1916.

An appreciation of the Gary system as exemplified in New York City.

784. **Bourne, Randolph S.** New York and the Gary system. Educational administration and supervision, 2 : 284-89, May 1916.

The writer says that after close observation for a year and a half he finds that the Wirt plan provides an organization more effective in administration, richer in curriculum and more economical in cost than any plan which the American public is likely to be able to finance for many years to come.

785. **Crozet, Paul.** La vie pédagogique, la guerre et la culture classique. Revue universitaire, 25 : 116-24, February 1916.

Gives the attitude of the French professors as opposed to the German professors in regard to the war and issues arising therefrom.

786. **Darroch, Alexander.** Education and humanism. Hibbert journal, 14:705–12, July 1916.

The writer says that in addition to scientific education, Europe needs above all in the future "a liberal education—an education which will free men's minds from all narrow, petty, and national interests." To scientific education must be added moral and spiritual regenerating forces.

787. **Dealey, William L.** The theoretical Gary. Pedagogical seminary, 23 : 269–82, June 1916.

This study is a digest of the Gary literature.

788. **De Grassi, G.** The educational system of Italy. Cosmopolitan student, 6: 150, 152–54, April–May 1916.

789. **Dewey, John.** American education and culture. New republic, 7 : 215–17, July 1, 1916.

Speaks of public education as "the potential means for effecting the transfiguration of the mechanics of modern life into sentiment and imagination."

790. **Fuller, H. de W.** The Gary system. Nation, 102 : 698–99, June 29, 1916.

A summary and a criticism.

791. [Gary plan] New republic, 7 : 219–23, July 1, 1916.

Two appreciative articles on the Gary system: "The teacher and the Gary plan," by Elsa Neland; and "The meaning of the Wirt plan," by Alice B. Fernandez.

792. **Georgia. Department of education.** Educational survey of Monroe County, Georgia. By M. L. Duggan, rural school agent . . . Under the direction of the Department of education. [Atlanta?] 1916. 51 p. illus. 8°.

No. 9 in a series of educational surveys of the counties of Georgia.

793. ———— ————. Educational survey of Randolph County, Georgia. By M. L. Duggan, rural school agent . . . Under the direction of the Department of education. [Atlanta?] 1916. 29 p. illus. 8°.

No. 8 in a series of educational surveys of the counties of Georgia.

794. **Grand Junction, Colo. Survey committee.** A survey of the city schools of Grand Junction, Colorado. District no. 1, Mesa county. Grand Junction, Colo., The Daily news press, 1916. 65 p. 8°.

Survey committee: Frank L. Clapp, director of the survey; William A. Cook; Samuel Quigley, Ben Griffith, chairman; H. B. Jones, T. M. Todd.

795. **Hunt, Rockwell D.** The new education. Western journal of education, 22 : 12–14, June 1916.

Address delivered before California Council of education, Southern section, November, 1915.

796. **Jardillier, Robert.** La guerre et l'enseignement littéraire. Revue universitaire, 25 : 258–64, April 1916.

In conclusion the author states that the country demands a mobilization of all military, economic, moral, and intellectual forces, and that on the last point education contains all the resources necessary to answer the appeal.

797. **Johnston, Harry H.** The public service and education. Nineteenth century, 80 : 113–28, July 1916.

A criticism of education as related to the public service of England. Argues against the classics.

798. **Liard, Louis.** La guerre et les universités françaises. Revue internationale de l'enseignement, 36 : 166–89, May-June 1916.

"Conférence fait au Musée social."

799. **Lynch, Margaret.** Some weaknesses in grammar schools. Optimist, 2 : 178–82, May 1916.

800. **Mais, Stuart Petre Brodie.** A public school in war time. London, J. Murray, 1916. 164 p. 12°.

Reprinted in part from the School guardian.

801. **Marriott, J. A. R.** The educational opportunity. Hibbert journal, 14 : 713–24, July 1916.

Discusses educational policies as related to England. The character of English education.

802. **Mayo, C. H. P.** Educational reform. National review, 67 : 764–74, July 1916.

Conditions in England. Criticises the classical ideals of the English secondary schools. Advocates more instruction in science.

803. **National association of corporation schools.** A report on public education. Business journal, 40 : 519–21, July 1916.

Report submitted to the fourth annual convention of the National association of corporation schools at Pittsburgh, Pa., June 1, 1916.

804. **Newmeyer, W. H.** The inefficient child. Pittsburgh school bulletin, 9 : 265–70, June 1916.

The assistant superintendent of a large store in Pittsburgh tells of his experience in dealing with children from 14 years of age and up. Describes the inefficiency of the boys and girls in his store in spelling, writing, arithmetic, etc.

805. **Sakamoto, K.** Japanese education of today. Educational review, 51 : 1–9, June 1916.

Describes the Japanese school system; and incidentally the study of English.

806. **Samonati, Alfredo.** El organismo escolar americano. Anales de instrucción primaria (Montevideo, Uruguay) 13 : 179–335, July 1914–December 1915.

Continues an article on same subject in the Anales, v. 10, p. 316–428.

A survey of methods of instruction in various subjects, and of special features of organization, in the schools of the United States.

807. **Snedden, David.** An educational quest. School and society, 3 : 833–43, June 10, 1916.

Remarks of Commissioner David Snedden on the occasion of a complimentary dinner tendered by the schoolmen of Massachusetts, May 19, 1916.

808. **Talbot, Winthrop.** The American illiterate. World's work, 32 : 303–5, July 1916.

"The significant increase of illiteracy among the white immigrants of the north and west, and its decrease among every other class of people in the country."

809. **Thamin, Raymond.** L'Université de France et la guerre. Revue des deux mondes, 34 : 294–324, 587–618, July 15, August 1, 1916.

Services rendered by the teachers of France to their country during the great war.

810. **Tobin, Richard T.** The aristocracy of the public school system. Optimist, 2 : 129–37, April 1916.

811. **Vincent, George E.** Education in the next generation. Independent, 86 : 512–15, June 26, 1916.

Says that the Federal government will be compelled "to cooperate with the states in bringing about something like democracy in education throughout the nation."

812. **Willcox, William G.** What modern education means. Journal of education, 83 : 677–79, June 22, 1916.

An address before the New York Board of trade stating the pressing needs in the administration of the New York schools.

PEDAGOGICS AND DIDACTICS.

813. **Armani, T.** Posizioni nuove di vecchi problemi. Milano-Roma [etc.] Società editrice Dante Alighieri di Albrighi, Segati e c., 1916. xvi, 240 p. 8°.

A collection of essays on educational and philosophical subjects, in which the author discusses pedagogy as a science, the principle of sufficient reason, the theory of knowledge, the unity of didactic processes, and some forms of home education.

814. **Averill, Lawrence A.** Back to Pestalozzi. Educational review, 51 : 10–20, June 1916.

The writer says that the great contributions of Pestalozzi to the teaching profession are as follows: (1) Natural education as opposed to formal instruction; (2) the significance of home education; (3) self-activity; (4) adaptation to the age of the child; (5) the psychology of individual differences; (6) beginnings of experimental psychology.

815. **Chapman, John Jay.** The schoolmaster. Atlantic monthly, 117 : 650–54, May 1916.

Says that the defect of American education is diffuseness; it ought to be met and corrected in every field of life. Commends the headmasters in private schools for having more freedom of action than "any other officers in the hierarchy of education."

816. **Davis, William Holmes.** Reprints of short articles on school matters. Danville, Va., The Danville school [1916] 24 p. 8°.

CONTENTS.—Public inspection of private secondary schools.—The growth and importance of the private boarding-school.—Planning for the future of private secondary schools.—University's obligation to future students.—Parents should visit schools before choosing.—Colleges and churches.—The private boarding-school as a community builder.—New Year thoughts about schools.—Biography in secondary schools.—The democracy of the private boarding-school.—What can a private school do?

817. **Goodrich, Henry W.** A suggestion for a cultural course. Educational review, 51 : 50–56, June 1916.

Writer says that the cultural course as now constituted does not produce a knowledge of the best that has been done and said in the world, but a "jumbled mass of uncorrelated matter."

818. **Jones, George Ellis.** Training in education. Pittsburgh, Pa., University of Pittsburgh, 1916. 113 p. 8°. (University of Pittsburgh bulletin. General series. vol. 12, no. 17.)

"A study of the basis, functioning, and examples of activity in learning."

819. **Kendall, C. N.** Two agencies in education of children—the home and the school. Child-welfare magazine, 10 : 324–27, May 1916.

820. **Keyser, Cassius J.** The human worth of rigorous thinking; essays and addresses. New York, Columbia university press, 1916. 314 p. 8°.

821. **Krebs, Henry C.** Reaching the children; a book for teachers and parents; with introduction by C. N. Kendall. New York and Chicago, The A. S. Barnes company [1916] vi, 127 p. 16°.

822. **Moore, Ernest C.** What is education? Education, 36 : 564–70, May 1916.

Says that education is "the process by which one learns to use his own mind in socially profitable ways in the making of his own knowledge."

823. **Prosser, Charles A.** Education as preparedness. School and society, 3 : 796–807, June 3, 1916.

An address before the Harvard teachers association, Boston, March 11, 1916.

824. **Russell, Bertrand.** Education as a political institution. Atlantic monthly, 117 : 750–57, June 1916.

The writer says: "The wish to preserve the past, rather than the hope of creating the future, dominates the minds of those who control the teaching of the young." Analyzes the existing systems of education, and calls for a reform.

825. **Tear, Daniel A.** Motor activity and elementary education. Educational bi-monthly, 10 : 444–52, June 1916.

826. **Vidari, Giovanni.** Elementi di pedagogia. Milano, U. Hoepli, 1916. 401 p. 16°.

827. **Wilson, H. B.** *and* **Wilson, G. M.** The motivation of school work. Boston, New York [etc.] Houghton Mifflin company [1916] ix, 265 p. 12°.

Designed to aid teachers in discovering problems and motives for the work that will make it appeal to and interest the pupil.

828. **Young, Ella Flagg.** Democracy and education. Journal of education, 84 : 5–6, July 6, 1916.

A discussion of Professor Dewey's book "Democracy and education."

EDUCATIONAL PSYCHOLOGY: CHILD STUDY.

829. **Arnold, Felix.** Weights and school progress. Psychological clinic, 10 : 33-39, April 15, 1916.

Gives tables showing with convincing regularity that the lighter pupil is the lower in his school grade.

830. **Bateman, W. G.** The ideals of some western children. Educational review, 51 : 21-39, June 1916.

Results of a study of 1200 children in the public schools of Missoula, Mont.

831. **Betts, George Herbert.** The mind and its education. Rev. and enl. ed. New York, D. Appleton and company [1916] xvi, 311 p. 12.

832. **Binet, Alfred** *and* **Simon, Th.** The development of intelligence in children (the Binet-Simon scale); tr. by Elizabeth S. Kite. [Baltimore, Williams & Wilkins company, 1916] 336 p. front. 8°. [Publications of the Training school at Vineland, N. J. Department of research, no. 11.)

833. ———. The intelligence of the feeble-minded; tr. by Elizabeth S. Kite. [Baltimore, Williams & Wilkins company, 1916] 328 p. illus. 8°. (Publications of the Training school at Vineland, N. J. Department of research, no. 12.)

834. **Birch, T. Bruce.** Standard tests and scales of measurements. Psychological clinic, 10 : 49-57, April 15, 1916.

A paper read before the Schoolmasters' club of Central Ohio.

835. **Bonser, Frederick C.** The selective significance of reasoning ability tests. Journal of educational psychology, 7 : 187-200, April 1916.

"To what extent do tests of reasoning ability enable us to predict the probable success of pupils in school? The author attempts to answer this question on the basis of a study of the school records of the 757 fourth, fifth, and sixth grade children tested in reasoning by the author nine years ago. Boys in the highest quartile of the reasoning tests have 3.5 as much chance of finishing the high school as those in the lowest quartile."

836. **Brown, H. A.** The significance of the measurement of ability to read. Education, 36 : 589-610, May 1916.

The aims dominating the teaching of reading should be: "(1) Teaching to read should mean teaching to read silently, *i. e.*, teaching to study efficiently. (2) Instruction at every step should be carefully adapted to the scientifically determined needs of individual pupils. (3) The teaching of reading should have for its aim to lead the child into an acquaintance with the world's best literature."

837. **Carey, N.** Factors in the mental processes of school children. British journal of psychology (London) 8 : 170-82, May 1916.

Part 3 of series. Deals with factors concerned in the school subjects.

838. **Freeman, Frank N.** Experimental education. Laboratory manual and typical results. Boston, New York [etc.] Houghton Mifflin company [1916] viii, 220 p. 12°. (Riverside textbooks in education, ed. by E. P. Cubberley.)

839. ———. The psychology of the common branches. Boston, New York [etc.] Houghton Mifflin company [1916] xii, 275 p. 12°.

840. **Gray, P. L.** Norms of performance in the fundamental processes of arithmetic. Journal of experimental pedagogy and training college record (London) 3 : 310-18, June 5, 1916.

Study made in schools of all grades and types of Leeds, England; 3,645 boys and 3,715 girls.

841. **Hall, G. Stanley.** The child from eight to twelve. Mother's magazine, 11 : 27-28, August 1916.

The characteristics, instincts, etc., of the child from eight to twelve.

842. **Hanus, Paul H.** Measuring progress in learning Latin. School review, 24 : 342–51, May 1916.

An effort to measure the growth of power in three elements of Latin assumed to be fundamental—vocabulary, translation, and grammar. Endeavors to ascertain what correlations exist between these phases of growth.

843. **Heilman, J. D.** Psychology in the schoolroom. Journal of educational psychology, 7 : 337–47, June 1916.

Read before the Superintendents' and principals' section of the Colorado state teachers' association, November 5, 1915.

844. **Hill, David Spence.** The practical in educational research. Psychological clinic, 10 : 65–70, May 15, 1916.

A paper prepared for the Round table of directors of educational research, Department of superintendence, National education association, Detroit, February 24, 1916.

845. **La Rue, Daniel Wolford.** Making the most of the children. New York, The Educational book company [1916] 135 p. 12°.

Seeks to answer the questions, How can we discover and develop the best that is born in our children and, How get them acquainted with their own futures?

846. **Lewis, E. E.** Testing the spelling abilities of Iowa school children by the Buckingham spelling tests. Elementary school journal, 16 : 556–64, June 1916.

Study of the spelling abilities of 8,624 Iowa school children in 10 cities, approximately 1,500 children in each grade from the third to the eighth inclusive. Author does not regard the results of his investigation as final.

847. **MacDougall, Robert.** Habit and the social order. School and society, 3 : 726–37, May 20, 1916.

An address before the New York Schoolmasters' Club.

848. **Mead, Cyrus D.** *and* **Sears, Isabel.** Additive subtraction and multiplicative division tested. Journal of educational psychology, 7 : 261–70, May 1916.

Delivered before Section L of the American association for the advancement of science, December 29, 1915.

"In two second grade and two third grade classes preliminary tests were made to determine the abilities of the pupils in addition combinations. One second grade class was then taught subtraction for four months by the usual 'take away' method, and the other by the 'additive' method. The same procedure was followed with division in the third grade classes. The 'take away' method gave the better results in subtraction, and the 'multiplicative' method in division."

849. Mentality tests: a symposium. Journal of educational psychology, 7 : 229–40, 278–86, 348–60, April, May, June 1916.

850. **Moss, Sanford A.** Aptitude as a basis for education. Engineering education, 6 : 637–50, May 1916.

Discusses the subject "Should time be spent in study of a subject for which there is no aptitude, and which can give no direct benefit, for the sake of the indirect benefit in the way of culture, mind and will training?" Concludes that "aptitude is a real essential for successful use of a subject, and that no actual use can be made of a subject by an inapt person who attempts to make laborious study take the place of aptitude."

851. **Pintner, Rudolf** *and* **Gilliland, A. R.** Oral and silent reading. Journal of educational psychology, 7 : 201–12, April 1916.

"Eighty elementary pupils, from the third to the eighth grades, twenty high school pupils, and thirty college students were tested in both oral and silent reading. Pupils of the third and fourth grades do better in oral than silent reading, those in grades five to eight do about as well in either, while high school and college students do much better in silent reading."

852. **Rugg, Harold Ordway.** The experimental determination of mental discipline in school studies. Baltimore, Warwick & York, inc., 1916. 132 p. 12°.

"Selected bibliography": p. 117–120.

853. **Starch, Daniel.** A scale for measuring ability in arithmetic. Journal of educational psychology, 7 : 213–22, April 1916.

"This scale is designed to measure ability in arithmetical reasoning as shown in the solution of concrete problems, and is composed of a serious of problems arranged in the order of steps of increasing difficulty. The value of the problems was determined experimentally by testing 2,515 children from grades four to eight."

854. **Terman, Lewis M.** The measurement of intelligence; an explanation of and a complete guide for the use of the Stanford revision and extension of the Binet-Simon intelligence scale. Boston, New York [etc.] Houghton Mifflin company [1916] xviii, 362 p. 12°. (Riverside textbooks in education, ed. by E. P. Cubberley.)

855. **Tidyman, W. F.** A descriptive and critical study of Buckingham's investigation of spelling efficiency. Educational administration and supervision, 2: 290-304, May 1916.

856. **Young, Herman H.** The Witmer formboard. Psychological clinic, 10 : 93-111, June 15, 1916.

Bibliography: p. 110-11.

857. **Zeidler, Richard.** Tests of efficiency in the rural and village schools of Santa Clara county, California. Elementary school journal, 16 : 542-55, June 1916.

The writer says: "The object of this study was to measure the results of arithmetic teaching in the rural and village schools of Santa Clara county, and to ascertain the status of such schools in the teachings of the fundamentals in arithmetic as compared with the work in localities where similar tests have been made."

Contains statistical tables and graphs.

SPECIAL METHODS OF INSTRUCTION.

858. **Ballard, Anna W.** The direct method and its application to American schools. Educational review, 51 : 447-56, May 1916.

Advocates the direct method, because of the effect on the pupils. It holds their attention, arouses their interest and their ingenuity, and wakens their desire to excel.

859. **Bogardus, Emory S.** Education and motion pictures. Western journal of education, 22 : 18-19, May 1916.

The extent to which motion pictures are used for educational purposes.

860. **Feasey, J. Eaton.** Open-air education: outdoor instruction for all schools. World's work (London), 28 : 54-62, June 1916.

Practical suggestions for teaching various useful things: Water level and gradients; glasses and heat; direction and map making; sound waves and echoes; nature study and chemistry.

861. **Garrard, G. W.** The use of moving pictures in educational work. Wyoming school journal, 12 : 259-62, May-June 1916.

Discusses the opportunities for good that lie in the proper use of moving pictures and the difficulties involved in the installation and operation of moving picture apparatus.

862. **Koch, Frederick H.** The amateur theater in the university. Quarterly journal of the University of North Dakota, 6 : 298-308, July 1916.

An address delivered at the sixth annual convention of the Drama league of America, St. Louis, April 26, 1916.

Tells of the work of the Little play house of the University of North Dakota.

863. **Kress, E.** De l'utilité du cinématographe dans l'enseignement. Paris, C. Mendel [1916] 32 p. 12°. (Bibliothèque de photo-revue.)

On cover: Bibliothèque générale de cinématographie. no. 6, série rose.

864. **Wolgamott, Alberta M.** Moving pictures in industrial education. Manual training and vocational education, 17 : 745-49, June 1916.

In this article Miss Wolgamott gives "a summary of the present situation with reference to the moving picture as a means in industrial education. She not only offers helpful suggestions to users of moving picture reels but makes clear certain limitations which are also important to keep in mind. The article looks toward the perfection of the moving picture machine and its wider use in education."

SPECIAL SUBJECTS OF CURRICULUM.

865. **Archer, Richard L.; Owen, L. V. D.,** *and* **Chapman, A. E.** The teaching of history in elementary schools. London, A. & C. Black, ltd., 1916. 263 p. 12°.

866. **Association of history teachers of the Middle states and Maryland.** Proceedings of the meetings held in 1915, at Baltimore, Md., and Philadelphia, Pa. 126 p. 8°. (Edgar Dawson, secretary-treasurer, Hunter college, New York, N. Y.)

Contains: 1. R. W. Kelsey: Recent changes in the teaching of history in the universities and colleges of the Middle states and Maryland, p. 3-10. 2. D. C. Knowlton: Some recent changes in the teaching of history of the Middle states and Maryland, p. 11-22. 3. E. E. Giltner: A description of the changes in the teaching of history in the elementary schools from 1910 to 1915, p. 23-32; Discussion, p. 32-34. 4. J. M. Vincent: The literary recreations of the historical teacher, p. 35-53. 5. L. J. Hedge: The differentiation of history teaching in the elementary school, seventh grade, from that of the high school, senior class, illustrated by reference to the causes of the American revolution, p. 54-61. 6. W. E. Lingelbach: The content of the course in European history in the secondary schools, p. 80-87. 7. Helen L. Young: The content of the course in European history in secondary schools, p. 88-95. 8. A. C. Bryan: The content of the course in European history in secondary schools, with special reference to the influence of vocational education, p. 96-104; Discussion, p. 104-13.

867. **Ayer, Fred Carleton.** The psychology of drawing, with special refeience to laboratory teaching. Baltimore, Warwick & York, inc., 1916. 186 p. 12°.

Bibliography: p. 169-180.

868. **Baker, Franklin T.** Shakspere in the schools. English journal, 5 : 299-309, May 1916.

Reprinted, with the permission of the author, from Shaksperean studies, by members of the English faculty of Columbia University; published by the Columbia University press.

869. **Beasley, E. Gertrude.** The reorganization of English in the elementary school. Elementary school journal, 16 : 565-70, June 1916.

Writer makes a plea for "direct emphasis on the laws and forms of expression."

870. **Bourgin, Hubert.** L'éducation dans et par les classes de français. Revue internationale de l'enseignement, 36 : 196-210, May-June 1916.

A discussion of the two problems in the educative value of teaching French, general and theoretical and special and practical.

871. **Brenna, Ernestina.** Metodologia dell'insegnamento storico con speciale riguardo alla scuola popolare. Milano, New York [etc.] F. Vallardi [1916] 216 p. 12°. (Biblioteca enciclopedica Vallardi. Biblioteca pedagogica.)

"Appendice bibliografica": p. [211]-216.

872. **Briggs, Thomas H.** General science in secondary schools. Teachers college record, 17 : 19-30, January 1916.

Also separately reprinted.

873. **Caldwell, Otis W.** Central association of science and mathematics teachers. Report of the Committee on a four-year high school science course. School science and mathematics, 16 : 393-99, May 1916.

Read before the Central association of science and mathematics teachers, Chicago, November 27, 1915.

874. **Davis, William Hawley.** Is debating primarily a game? Quarterly journal of public speaking, 2 : 171-79, April 1916.

Read at the third annual meeting of the New England oral English and public speaking conference, Cambridge, Mass., April 7-8, 1916.

Urges the necessity of improving debating ideals and practices, so that this important means of securing effective training in speaking may be rescued from the list of games and pastimes.

875. **Deihl, J. D.** A plan for handling advanced reading texts in modern foreign languages. School review, 24 : 359–64, May 1916.

Writer's plan consists of the following processes: (1) A natural unit of the text is read aloud in the foreign language; (2) the pupils prepare a list of the unknown words and expressions; (3) the pupils define the words written down; (4) the text is translated with the assistance of the completed list; (5) the unit is again read aloud in the foreign language.

876. **Fontaine, André.** Pour la raison, par le français. Revue pédagogique, 68 : 245-68, April 1916.

A discussion of the method of teaching the mother tongue to French children.

877. **Foucher, A.** L'enseignement de l'indianisme à Columbia university. Revue internationale de l'enseignement, 36 : 190–95, May–June 1916.

A highly complimentary description by a "visiting professor" of the division of Indo-Iranic languages of Columbia university, under the charge of Professor A. V. W. Jackson.

878. **Illinois music teachers' association.** Official report, twenty-seventh annual convention, Centralia, Ill., May 4–7, 1915. 146 p. 8°. (Herbert O. Merry, secretary-treasurer, Lincoln, Ill.)

Contains: 1. E. V. Tubbs: Music in the high school, p. 17–22. 2. Frederic Lillebridge: Psychology and pedagogy of music teaching, p. 42–53. 3. R. G. McCutchan: What the state board of education can do for the standardization of music teaching, p. 88–95. 4. J. L. Erb: The music teacher and standardization, p. 96–102; Discussion, p. 102–105.

879. **Lange, Alexis.** Literature as educational means. English journal, 5 : 371–78, June 1916.

Advocates the auxiliary use of books that may have "no claim to be classed with fine art but that are eye-opening, imagination-stirring, socializing records and interpretations of advancing thought in the realm of science, of politics, of social life in general."

880. **Lanson, Gustave.** Un jugement américain sur l'enseignement français. Revue universitaire, 25 : 166–71, March 1916.

A Review of Rollo Walter Brown's How the French boy learns to write.

881. **Lester, John A.** Teaching freshmen to spell. English journal, 5 : 404–10, June 1916.

882. **Lewis, E. E.** General science in Iowa high schools. School review, 24 : 426–35, June 1916.

Study based upon data obtained from replies to a questionnaire sent to the principals of the 345 accredited high schools, January 1916. Writer says the greatest need is for *information* rather than *training* in science. Instruction in science throughout the elementary school and high school should be general rather than special.

883. **McCrea, Nelson G.** The examinations in Latin of the college entrance examination board. Classical journal, 11 : 466–81, May 1916.

Presents statistical tables exhibiting the results for 1915 of the combined records of the candidates from 7 schools that send all, or practically all, of their pupils to the Board's examinations exclusively, with other statistics.

884. **Macleod,** *Mrs.* **Alice W.** Majors and credits in public speaking. Quarterly journal of public speaking, 2 : 149–52, April 1916.

Results of a questionnaire sent out to determine the relative place of the work of public speaking in the university curriculum and the credits allowed for such work.

885. **Mahy, M. Catherine.** The differentiation of English classes in the high school. Education, 36 : 375–80, May 1916.

Gives a course for foreign classes, planned for the schools of Providence, R. I.

886. **Miller, William T.** Education and peace. Popular educator, 33 : 486–87, 527, May 1916.

How geography, history, literature and religion can be utilized in educating for peace.

887. Ohio history teachers' journal, May 1916.

Contains: 1. History: the "Most useless subject in the curriculum." 2. "Telling the story." 3. Collateral reading. 4. Text books.

888. **Opdycke, John B.** New wine and old bottles. English journal, 5 : 392–400, June 1916.

Gives a few of the new departures in the twentieth century teaching of English and pleads with the publisher for a new text-book.

889. **Pye, D. R.** Science and the public schools. Nineteenth century, 80 : 101–11, July 1916.

Conditions in secondary schools in England. A plea for more and better science teaching.

890. **Rapeer, Louis W.** The outside of the cup: relative values in high-school English. English journal, 5 : 379–91, June 1916.

Writer contends that "since most of our expression is oral expression, we should develop ability especially along this line."

891. Report of Committee of the New England association of teachers of mathematics on secondary school mathematics, April, 1916. Mathematics teacher, 8 : 191–218, June 1916.

Selected references: p. 217–18.

892. Revised report of the biology committee of the National education association commission on the reorganization of secondary education, to be presented, after discussion and revision, to the reviewing committee of that commission. School science and mathematics. 16 : 501–17. June 1916.

893. **Sargent, Walter** *and others*. Course of study in art in the high school, School of education, the University of Chicago. School review, 24 : 409–25, June 1916.

Gives outline of subject-matter in the general art course, and of course in survey of art.

894. ———. Course of study in drawing in the elementary school, School of education, the University of Chicago. Elementary school journal, 16 : 533–41, June 1916.

Part 3 of a series of articles. Treats of methods and subject-matter, standards of attainment, etc.

895. **Scott, W.** Errors in arithmetic. Journal of experimental pedagogy and training college record (London) 3 : 296–307, June 5, 1916.

896. **Sherwood, Margaret.** The deserted temple. Atlantic monthly, 117 : 760–72, June 1916.

A plea for humanistic studies. Describes the intellectual and spiritual experience derived from the study of literature.

897. **Small, Albion W.** Fifty years of sociology in the United States. American journal of sociology, 21 : 721–864, May 1916.

Contains an account of the organization of instruction in the social sciences in the United States. In the section on Extra-academic organization for promotion of social science, the writer lists some of the better-known of these organizations in the order of their formation, also a list of journals devoted to social science.

898. **Taylor, Aravilla Meek.** The extent of adoption, and attitude toward general science. School and society, 4 : 179–86, July 29, 1916.

899. **Towne, Charles F.** The relative importance of oral and silent reading. Education, 36 : 571–74, May 1916.

900. **Tryon, R. M.** History in the junior high school. Elementary school journal, 16 : 491–507, May 1916.

Presents a course of study in history and civics. Gives an interesting tabular view of history study in the junior high schools of the United States, and calls attention to the lack of uniformity in the matter of the grades composing such schools.

901. **Wesley, Charles H.** The problems of sources and methods in history teaching. School review, 24 : 329–41, May 1916.

Writer says the method of many of our high school teachers is "detrimental to the growth of historical perspective or love of history in immature students." Discusses the equipment of the historical department.

902. **West, O. P.** Music in high schools, colleges, universities. Southern school journal, 27 : 10–15, June 1916.

Deals particularly with standardizing music instruction.

903. **Winslow, Isaac O.** How much mathematics should be required for graduation from high school. Education, 36 : 581–84, May 1916.

Writer says: "My answer, then, to the question proposed must be that as a universal requirement for graduation from high schools a full course of mathematics for one year should be sufficient."

904. **Zick, Henry.** The teaching of modern languages in European secondary schools. p. 488–510. 8°.

Reprinted from the Educational review, New York, May 1916.
Describes work in England, France, and Germany.

RURAL EDUCATION.

905. **Conference on rural education,** State normal school, Worcester, Mass., April 28, 1916. [Papers] Education, 36 : 627–71, June 1916.

Contains: 1. M. S. Stone: The restoration of country life in New England, p. 630–33. 2. G. A. Works: The meaning of the rural school as the community center, p. 634–38. 3. David Snedden: Important lines of endeavor for community work in Massachusetts, p. 639–45. 4. C. C. Ferguson: The opportunity of the rural school for civic betterment, p. 646–49. 5. K. L. Butterfield: Rural school as a community center, p. 650–56. 6. H. A. M. Briggs: Rural reconstruction—experience in a Massachusetts community, p. 657–65. 7. E. J. Ward: The community secretary, p. 666–68. 8. H. O. Clough: Community activities and supervision of country schools in Connecticut, p. 669–71.

906. **Johnson, T. J.** Training rural students for rural life. Southern workman, 45 : 449–53, August 1916.

Work of the Woodstock training school, Lucy, Tenn.

907. **Smith, Grace C.** What can be done in the little country school? Outlook, 113 : 717–22, July 26, 1916.

Discusses consolidation, extension work, etc.

SECONDARY EDUCATION.

908. **Pennsylvania state educational association. High school department.** Proceedings of annual meeting, session at Scranton, December 27–29, 1915. Pennsylvania school journal, 64 : 481–504, May 1916.

Contains: 1. A. S. Martin: A high-school day of six hours and directed study, p. 481–84. 2. D. R. Sumstine: A new system of grading to supplant the percentile method, p. 484–87. 3. S. C. Mitchell: Constructive citizenship, p. 487–89. 4. F. C. Henderschott: The corporation school, p. 490–92. 5. W. D. Lewis: The socialized high school, p. 492–95. 6. E. L. Whatenecht: Latin in its relation to English as a vocational subject in commercial education, p. 497–500. 7. Hazel L. Davies: Elimination of waste in Latin, p. 500–504.

(*Department of Rural Schools, p. 504–20.*)

Contains: 1. Anna Comstock: How nature study illuminates geography in the grades, p. 504–5. 2. E. E. Rahm: Rural schools as social centers, p. 505–8. 3. Florence Hocker: Plays and games for rural schools, p. 508–10. 4. Jessie Field: Leadership in the country, p. 510–12. 5. L. H. Dennis: The standard rural school, p. 512–14. 6. F. A. Christman: Adapting of the rural school to its environment, p. 514–16. 7. J. L. Randall: A neglected part of education of city child, p. 516–18. 8. Nellie S. Salton: Nature study and gardening, p. 518–20.

909. **Colvin, Stephen S.** Some needs of our high schools. Education, 36 : 551–57, May 1916.

Conditions in Rhode Island and elsewhere. The writer says that the teaching problem is "the final problem, and all educational reform must aim in the last analysis at securing better teaching. The immediate question of the improvement of secondary teaching should be undertaken in a large measure by the teachers themselves."

910. **Davis, C. O.** North central secondary schools. School review, 24 : 436–49, June 1916.

Presents data for judging the character of work of the various schools accredited by the North central association of colleges and secondary schools.

911. **Judd, Charles H.** The qualitative definition of high-school units. School and society, 3 : 649-58, May 6, 1916.

Address delivered on April 14, 1916, before the Conference of the University of Chicago with affiliated secondary schools.

912. **Minnesota. Department of education.** The junior high school problem. A report prepared for the State high school board by E. M. Phillips and C. H. Barnes. 1916. 25 p. 8°. (Bulletin no. 59)

913. **Nutting, H. C.** The curriculum of the secondary school. School and society, 4 : 42-49, July 8, 1916.

Criticism of some of the ideas of Dr. Flexner as expressed in "A modern school," and the ideas of Prof. Rapeer, in School and society for April 15, 1916, on College entrance requirements.

914. **Prunty, M. C.** Factors, other than the curriculum, determining the success of the junior high school. American school board journal, 52 : 11–12, 80, June 1916.

This paper was read before the thirteenth annual conference of the Kansas high schools, Lawrence, Kansas, March 18, 1916.

915. **Russell, William F.** Economy in secondary education. Boston, New York [etc.] Houghton Mifflin company [1916] viii, 74 p. 12°. (Riverside educational monographs, ed. by H. Suzzallo)

916. **Snavely, Guy E.** The junior high school and the college. Educational review, 51 : 40–49, June 1916.

Advocates adapting the curriculums of the junior and senior high schools so that two years would be sufficient for the normal student now requiring three to complete the seventh, eighth, and ninth grades.

TEACHERS: TRAINING AND PROFESSIONAL STATUS.

917. **North central council of state normal school presidents.** Synopsis of papers read at the meetings held February 18–19, 1916, Chicago, Ill. Minnesota state normal schools quarterly journal, 1 : 49–58, April 1916.

The general theme of the meeting was "Greater educational leadership for state normal schools."

918. **Bulifant, Blanche Virginia.** Establishing a closer relationship between the work of the normal school and that of the training school. Educational conference, 2 : 1–6, May 1916.

Gives some of the means of bringing about closer relationship between the normal school and the training school and so preventing waste.

919. **Chamberlain, Arthur Henry.** Organization for effectiveness. Sierra educational news, 12 : 344–50, June 1916.

The California teachers' association and the California council of education, their history, organization and what they have accomplished.

920. **Chambers, Will Grant.** The obligations of the school of education to its mature, irregular students. School and society, 3 : 763-75, May 27, 1916.

Discusses methods of admitting to college and schools of education mature teachers lacking full entrance requirements and the granting of degrees to such irregular students.

921. **Corbett, Henry R.** Pensions for teachers. American school, 2 : 170–72, June 1916.

922. **Corson, O. T.** Ph. D.'s and teachers. Ohio educational monthly, 65 : 195–98, May 1916.

923. **Gaw, Allison.** The collegiate training of the teacher of high-school English. English journal, 5 : 320–31, May 1916.

Contains a five-year collegiate course for preparation for the teaching of English in the high school.

924. **Jessup, Walter A.** The teaching staff. Cleveland, O., The Survey committee of the Cleveland foundation, 1916. 114 p. 12°.

One of the 25 sections of the report of the education survey of Cleveland conducted by the Survey committee of the Cleveland foundation in 1915.

925. **Judd, Charles H.** The professional significance of appointments by teachers' agencies. Sierra educational news, 12 : 331–33, June 1916.

The writer believes that ultimately the teachers' agencies will be absorbed into state departments of education or into state teachers' associations.

926. **Kline, Linus W.** What phases of psychology should be taught in normal schools and what amount of time should be devoted to the subject? Minnesota state normal schools quarterly journal, 1 : 58–59, 64–68, April 1916.

927. **Lavarenne, Maurice.** A great French school in the war. Yale review, 5 : 758–74, July 1916.

Part played in the Great War by the students of the École normale supérieur.

928. **Maxwell, C. R.** Relation of the normal school to its graduates in the public school. School and society, 3 : 918–31, June 24, 1916.

Advocates a closer cooperation between the normal and the public schools.

929. **Pritchett, Henry S.** A comprehensive plan of insurance and annuities for college teachers. New York city, Carnegie foundation for the advancement of teaching, 1916. xix, 67 p. 4°. (Bulletin no. 9)

930. Self-directed teaching. School journal, n. s. 1 : 6–8, 16–17, June 8, 1916; 1–5, July 6, 1916.

The second and third of "a series of twelve articles for general reading and for teachers' reading circles, designed to help experienced teachers to develop larger freedom in teaching and to train young teachers in self-reliance in the classroom. The first article was printed in the issue of May 18, 1916."

931. Teaching and the teacher. Utah educational review, 9 : 5–15, June 1916.

The case for the teacher and his calling. Presented as the record of a Conference of the editors of the Review and others, May 19, 1916.

Contains: 1. What teaching is. 2. Conditions governing the teacher's work. 3. Occasion for a hopeful outlook. 4. What constitutes good instruction.

932. **Thomas, A. O.** A more reasonable basis for the certification of teachers. Better schools, 2 : 133–37, June 1916.

The writer says that the teachers' examination affords no clue to a number of qualities and traits of character essential to successful teaching. Advocates more rational means of selecting teachers.

933. **Thomas, W. Scott.** Are there too many high-school teachers in California? School review, 24 : 365–74, May 1916.

Says there is no oversupply of high-school teachers in the state, but there is some lack of individual adjustment which at times causes personal hardship.

934. **Walker, J. T.** The teacher in politics. Virginia state teachers quarterly, 2 : 81–86, May 1, 1916.

How the teacher can improve politics by imparting lofty ideas of citizenship and of office-holding to both his pupils and to his community, and by aiming to bring to the public view those moral qualities necessary for all leadership, if government is to be safe, beneficent, and patriotic.

935. **Winsor, Frederick.** The underpaid pedagogue. Atlantic monthly, 117 : 654–57, May 1916.

Writer says that the trouble with the profession is that there are no prizes in it. Cites the salaries received by several headmasters in England, which are far in excess of those paid in this country.

HIGHER EDUCATION.

936. **American association of collegiate registrars.** Proceedings of the sixth annual meeting . . . University of Michigan, Ann Arbor, April 20–22, 1915. 62 p. 8°. (Ezra L. Gillis, secretary-treasurer, University of Kentucky, Lexington, Ky.)

Contains: 1. G. W. Cram: Freshman dormitory scheme at Harvard university, p. 11-16. 2. L. A. Kalbach: Report of committee on uniform statistics, p. 16–20. 3. Walter Humphreys: The course in business administration at the Massachusetts institute of technology, p. 30–35. 4. A. W. Tarbell: A bachelor of arts course in the drama, p. 41–45. 5. Lelia G. Hartmann: The co-operative engineering course in the University of Cincinnati, p. 46–52.

937. **American association of university professors.** Report of the committee of inquiry on the case of Professor Scott Nearing of the University of Pennsylvania. 57 p. 8°. (Bulletin, vol. 2, no. 3, pt. 2, May 1916)

938. **Association of American universities.** Journal of proceedings and addresses of the seventeenth annual conference, held at University of California, August 27–28, 1915. 72 p. 8°.

Contains: 1. John Dewey: Faculty share in university control, p. 27–32; Discussion, p. 32–39. 2. A. O. Leuschner: The organization and budget of the graduate school and its relation to the other schools of the university, p. 40–49; Discussion, p. 49–57. 3. C. D. Marx: Questions relating to outside remunerative work by professors, p. 57–64; Discussion, p. 64–66.

939. **Bornhak, Conrad.** Les étrangers dans les universités allemandes. Revue de l'enseignement des langues vivantes, 33 : 65–67, February 1916.

Translation of an article in the Berliner lokal-anzeiger, June 15, 1915.

940. **Butler, Nicholas Murray.** A voyage of discovery. Scribner's magazine, 59 : 693-702, June 1916.

Narrates the experiences of the writer as a student in Berlin and Paris.

941. **Carpenter, William H.** Function of graduate schools in the universities of the United States. Educational review, 51 : 433–46, May 1916.

Says that the graduate school is "a vivifying force, not alone to the university of which it is a part, but also to the whole system of education upon which it is based."

942. **Clark, Thomas Arkle.** The fraternity and the college; being a series of papers dealing with fraternity problems. Menasha, Wis., The collegiate press, G. Banta publishing company [1916] 223 p. 12°.

943. **Elliott, Edward C.** Inaugural address of the chancellor of the University of Montana (1916) School and society, 3 : 909–18, June 24, 1916.

The ends which a university serves in a community.

944. Les étudiants étrangers dans les universités allemandes. Revue de l'enseignement des langues vivantes, 33 : 213-16, May 1916.

Gives the resolutions adopted by a committee of the students of the University of Berlin in regard to the attendance of foreign students at the German universities.

945. **Felmley, David.** What is a reasonable limit to which an institution may go in enrolling students in the first and second years, and yet retain the right to be classified as a senior college? American school, 2 : 101-104, April 1916.

Read before the North central association of colleges and secondary schools, Chicago, March 24, 1916.

Discusses the measure intended to shut out normal schools from the training of high-school teachers—the proposed classification of colleges according to percentage of senior college students.

946. **Foster, William T.** Faculty participation in college government. 5 p. 8°.

Reprinted from School and society, 3 : 594–99, April 22, 1916.

Plan of college government adopted by Reed college.

947. **Goodspeed, Thomas Wakefield.** A history of the University of Chicago . . . the first quarter-century. Chicago, Ill., The University of Chicago press [1916] xvi, 522 p. illus. 8°.

948. **Green, Edwin L.** A history of the University of South Carolina. Columbia, S. C., The State company, 1916. 475 p. illus. 8°.

949. **Hinchman, Walter S.** Where the college fails. Educational review, 51: 57–70, June 1916.

Deprecates the lecture and recitation methods of teaching, and advocates the "productive idea." The idea is based on "the fundamental principle that growth depends on production assumes merely that the student shall produce while he is learning."

950. **Jordan, David Starr.** A quarter century of Stanford. Stanford alumnus, 17 : 339–49, May 1916.

Commencement address, May 22, 1916.

An account of the past twenty-five years of Stanford University.

951. **McArthur, C. G.** *and* **C. B.** The menace of academic distinctions. Scientific monthly, 2 : 460–66, May 1916.

Discusses the snobbishness of academic distinctions—titles and honors and position, etc. Says the academics are "fostering the ideal of an intellectual aristocracy," which makes for inefficiency in a teacher.

952. **McConaughty, James L.** Dartmouth and the schools. Education, 36 : 558–63, May 1916.

Discusses the "new Dartmouth admission plan," which, as the writer states, is not really an admission scheme at all. The innovation is in the method of selecting the schools that shall be upon its approved list.

953. **McDermott, Edward J.** The proposed national university. Catholic educational association bulletin, 12 : 16–32, May 1916.

Reprinted from America by permission.

Discusses two questions—first, would an act of Congress establishing a National University be valid under the Constitution; second, would this act be wise and expedient, granting its constitutionality.

954. **Mathews,** *Mrs.* **Louis K.** Raising the standards of intellectual life. Journal of the Association of collegiate alumnae, 9 : 69–76, May 1916.

Shows in what ways the administration, the faculties and the students can raise the standard of intellectual life in the university.

955. **St. Lawrence university. Class of 1916.** Sixty years of St. Lawrence. Published by the class of 1916. Canton, N. Y., St. Lawrence university, 1916. 375 p. plates. 8°.

956. The teaching function of the college. School journal, n. s. 1 : 10–12, June 8, 1916.

The second of a series of articles in which will be presented some views of colleges and universities of America.

957. **Whitney, Willis R.** Research as a national duty. Science, n. s. 43 : 629–37, May 5, 1916.

Emphasizes the importance of material research. Colleges and universities of the United States not doing their full duty in this respect.

958. **Wickham, Joseph Francis.** Going to college. America, 15 : 141–42, 165–66, 193–94, May 20, 27, June 3, 1916.

SCHOOL ADMINISTRATION.

959. **National education association. Department of superintendence.** Proceedings . . . at the annual meeting held at Detroit, Mich., February 21–26, 1916. Published by the Association, 1916. 220 p. 8°.

Contains: 1. S. S. Marquis: The Ford idea in education, p. 20–27. 2. Debate: the best organization for American schools is a plan which shall divide these schools into six years of elementary training and six years of secondary training [by] C. H. Judd, p. 27–35; [by] C. G. Pearse, p. 35–44. 3. J. G. Becht: The public school and the new American spirit, p. 45–50. 4. T. W. Churchill: The superintendent as the layman sees him, p. 50–55. 5. G. C. Creelman: Some suggestions for improving the rural-school curricula, p. 57–63. 6. The minimum essentials versus the differentiated course of study in the seventh and eighth grades [by] L. D. Coffman, p. 63–68; [by] W. C. Bagley, p. 68–75; [by] David Snedden, p. 75–86. 7. O. T. Corson: Booker T. Washington—an appreciation, p. 93–98. 8. J. H. Francis: High points in the Los Angeles plan, p. 98–103. 9. L. P. Ayres: Significant developments in educational surveying, p. 104–11. 10. A. D. Yocum: Definiteness and compulsion in education, p. 114–18. 11. Alice M. Carmalt: Manners and morals—our problem, p. 118–21. 12. J. E. West: Scouting as an educational asset, p. 122–29. 13. Milton Fairchild: The national morality codes competition, p. 129–35. 14. Edward Hyatt: How not to train rural teachers, p. 135–38. 15. A. C. Monahan: The status and need of rural supervision-p. 141–46. 16. H. S. Weet: A first step in establishing the six-three-three organization, p. 146–52, 17. R. F. Crist: The education of foreigners for American citizenship, p. 155–58. 18. F. M. Hunter: Community activities as a means of motivation, p. 159–65. 19. J. F. Keating: Teaching tenure, p. 165–68. 20. J. H. Beveridge: Vacation-club work, p. 170–73. 21. M. B. King: Short-unit industrial courses, p. 173–77. 22. C. W. Cookson: The ethical as the essential factor in training for efficient citizenship in a democracy, p. 179–83. 23. George Melcher: The two phases of educational research and efficiency in the public schools, p. 183–88. 24. S. A. Courtis; Standardization of teachers' examinations, p. 188–96. 25. F. W. Ballou: Improving instruction thru educational measurement, p. 196–203. 26. E. B. Shallow: Does a strict enforcement of the compulsory education law assist teachers and supervisors in their work? p. 204–7; Discussion, p. 207–209.

Paper no. 2 also appears in American school, 2 : 74–80, 104–7, 140–42, March, April, May, 1916; no. 3 in School and society, 3 : 613–17, April 29, 1916; no. 6 in Educational administration and supervision, 2 : 219–34, April 1916; no. 12 in School news and practical educator, 29 : 416–20, May 1916; no. 18 in American schoolmaster, 9 : 160–70, April 1916; no. 23 in American school board journal, 52 : 23–24, 87, May 1916; no. 25 in Educational administration and supervision, 2 : 354–67, June 1916.

960. **National society for the study of education.** Fifteenth yearbook. Part II. The relationship between persistence in school and home conditions. Chicago, Ill., University of Chicago press, 1916. 119 p. 8°. (Guy M. Whipple, secretary-treasurer, University of Illinois, Urbana, Ill.)

Bibliography on Retardation and elimination, p. 112–19.

961. **Ayres, Leonard P.** School organization and administration. Cleveland, O., The Survey committee of the Cleveland foundation, 1916. 135 p. 12°.

One of the 25 sections of the report of the education survey of Cleveland conducted by the Survey committee of the Cleveland foundation in 1915.

962. **Baker, George M.** Constructive supervision. Kentucky high school quarterly, 2 : 18–39, July 1916.

Selected references: p. 39.

A compilation of lecture and reading notes collected during the past three years.

963. **Cubberley, Ellwood P.** Supplemental report on the organization and administration of School district number one in the city and county of Denver. Denver, Colo., The School survey committee, 1916. 21 p. diagrs. 8°.

964. **Deffenbaugh, W. S.** Supervision in smaller cities. Pennsylvania school journal, 65 : 15–19, July 1916.

The duties of supervisors of schools in small cities.

965. **Dick, William.** "How can school expenditures be minimized without impeding progress?" American school board journal, 53 : 15–16, 92–93, July 1916.

This paper was read before the National association of school board accounting officers, May 17, 1916.

Eliminating waste in school administration.

966. **Duke, E. A.** A guide to better schools. [Oklahoma City] Issued by R. H. Wilson, state superintendent of public instruction, 1916. 158 p. illus. 8°.

CONTENTS.—I. Physical features.—II. Health and sanitation.—III. Model schools.—IV. The teacher's home.—V. Consolidation.—VI. Union graded schools.—VII. Rural schools.—VIII. Social centers.—IX. Seed tests.—X. Flowers.—XI. Moonlight schools.—XII. Thrift teaching.—XIII. The school library.—XIV. Summary and conclusion.

967. **Knight, Frederick B.** The content and arrangement of the superintendent's report to the school board of a large town or small city. American school board journal, 53 : 27, 88–89, July 1916. illus.

968. **McAndrew, William.** The public and its school; a statement of the means of finding what the intelligent public expects of children and how a school system may be managed to deliver the goods. Relieved by pictures made by school girls and boys. Yonkers-on-Hudson, N. Y., World book company, 1916. xii p., 1 l., 76 p. illus. 12°. (School efficiency monographs)

"This book is Mr. McAndrew's annual report as division superintendent in charge of the elementary schools in Brooklyn."—Publisher's statement.

969. **New York academy of public education.** Report on home work in elementary schools made by Committee on administration. New York, New York academy of public education, 1916. 28 p. 8°.

Edward A. Stitt, chairman.

970. **Snedden, David.** Scientific methods in educational administration. Educational administration and supervision, 2 : 279–83, May 1916.

From the seventy-ninth annual report of Board of education, Massachusetts.

971. Views on boards of education. Journal of education, 83 : 683–89, 694, 700, 702, 704, 706, 708, 723–25, June 22, 29, 1916.

A symposium, containing the views of many school superintendents on the duties of boards of education.

972. **Wagner, Charles A.** Discussion of the State board of education's proposals for school legislation. 1916. 16 p. 8°.

Writer is secretary of the State board of education and commissioner of education of Delaware.

973. ———. Transition to the county unit plan of school control. American school board journal, 53 : 20–21, 82, July 1916.

Some of the problems that will arise where county control is to supersede district or township control.

SCHOOL MANAGEMENT.

974. **Bate, W. G.** How some pupils study. American school board journal, 53 : 22, 77–80, August 1916.

Time spent in study, study habits of pupils, and help from teachers.

975. **Busch, Ella Adeline.** The use of study-halls. Educational administration and supervision, 2 : 235–42, April 1916.

Suggests a way for creating more favorable conditions for study for those pupils who habitually waste a part of the time they spend in study-halls.

976. Corporal punishment in the high school—a symposium. High school quarterly, 4 : 234–40, July 1916.

An inquiry was recently sent out to the leading high schools in ten Southern states to determine the extent to which corporal punishment is used. 47% of the schools had no cases of corporal punishment during the year 1915–16; 32% had from 1 to 5 cases; 16% had from 6 to 20 cases; 5% had from 20 to 75 cases.

977. **Dearborn, George Van N.** Economy in study. Examination preparedness. Scientific American supplement, 81 : 410–11, June 24, 1916.

Fifth and final article of series. How to prepare for and how to perform mental examinations of all kinds. Discusses the psychology of examinations.

978. **Driggs, Howard R.** Essentials. Nebraska teacher, 18 :409–10, 412, 414, May 1916.

A plea to eliminate the non-essentials and vitalize everything taught by connecting it closely with life. A plea to "cut out and connect up." The school cannot teach every good thing nor take the whole responsibility for the child. The home, the church, the community should be made to do their part.

979. **Hall-Quest, Alfred Lawrence.** Supervised study; a discussion of the study lesson in high school. New York, The Macmillan company, 1916. xvii, 433 p. illus. 12°.

Bibliography: p. 409–416.

980. **Holmes, Edmond G. A.** Discipline and freedom. Nineteenth century, 80: 88–100, July 1916.

Writer says that neither "the discipline of compulsion nor the discipline of repression can moralise or socialise mankind." A plea for self-discipline—the discipline of freedom and self-control. Discusses the Montessori system.

981. **Pittenger, Benjamin F.** The school and the individual. American schoolmaster, 9 : 193–205, May 1916.

The author maintains that the school should give especial attention to the quantitative aspects of inherent variations and to the qualitative aspects of acquired differences by providing a very flexible system of promotion throughout each school course.

982. **Stevens, H. C.** A survey of retarded school children. School review, 24 : 450–61, June 1916.

Survey made in a small town of northern Minnesota. A large proportion of the retarded children were foreign-born.

983. **True, A. C.** The change of stress in making the curriculum from subject-matter to the individual. High school quarterly, 4 : 261–67, July 1916.

984. **Witham, Ernest C.** Teachers' marks in eighth A, B, and C divisions. Educational administration and supervision, 2 : 243–50, April 1916.

Reprinted.

In conclusion the writer says that the common tendency in many school systems is to rate pupils altogether too high.

SCHOOL ARCHITECTURE.

985. **Hoagland, Ira N.** Safety from fire in schools. Child-welfare magazine, 10: 317–22, May 1916.

986. **Willis, B. F.** The ideal rural school building. American school board journal, 52 : 22–24, June 1916.

"The present paper is an abstract of an address delivered to the Four-state rural life conference at the Philadelphia Chamber of commerce, February 9, 1916. The author has been the leading spirit in the movement for better school buildings in the Keystone state . . ."

SCHOOL HYGIENE AND SANITATION.

987. **Berkowitz, J. H.** School nurses, teachers, and parents. Need of their cooperation in following up cases for treatment. 3 p. 4°.

Reprinted from the Modern hospital, vol. 6, no. 6, June 1916.

988. **Kerr, James.** Newsholme's school hygiene. The laws of health in relation to school life. New ed., rewritten for all school workers. London, George Allen & Unwin ltd. [1916] 352 p. illus. 12°.

989. **Kingsley, Sherman C.** The work of the open-air schools conducted by the Elizabeth McCormick memorial fund. Better schools, 2 : 82–86, April 1916.

990. **Schmitt, Clara.** An experiment in the feeding of undernourished school children. Educational bi-monthly, 10 : 379–90, June 1916.

The results of an experiment in feeding school children at the University avenue school, Chicago.

991. **Todd, John B.** Constructive school hygiene. School and society, 3 : 617–24, April 29, 1916.

Gives a number of advantages of the one-story multiple-unit school, and says that the cottage schools are better in every way and cheaper.

PHYSICAL TRAINING.

992. **National collegiate athletic association.** Papers presented at the tenth annual convention, New York city, December 1915. American physical education review, 21 : 201–29, April 1916.

Contains: 1. L. R. Briggs: The president's address [Intercollegiate athletics] p. 201–203. 2. Albert Lefevre: Schedule-making and institutional responsibility, p. 204–208. 3. R. N. Corwin: College ideals and athletics, p. 209–14. 4. Howard McClenahan: Athletic standards, p. 215–19. 5. H. A. Garfield: Athletics for all, p. 220–24. 6. W. H. Taft: College athletics, p. 225–29.

993. **Arnold, E. H.** "Preparedness"—Presidential address. American physical education review, 21 : 351–59, June 1916.

At the twenty-third annual convention, Cincinnati, O., April 19, 1916.

Discusses the question "What has physical education done in preparing for any and all emergencies of life?"

994. **Bowen, Wilbur P.** Athletics for everybody. American schoolmaster, 9 : 206–13, May 1916.

995. **Fisher, George J.** How may we secure character and spiritual values through the activities of the physical department. Physical training, 13 : 254–63, June 1916.

SOCIAL ASPECTS OF EDUCATION.

996. **Brown, George A.** A rejoinder and a recognition of subjective aims in education. School and home education, 35 : 323–27, June 1916.

A rejoinder to W. I. Hamilton's article in this journal discussing Commissioner Snedden's address on the Social objectives as aims in education.

997. **Braucher, Howard S.** Why I believe that community and neighborhood centers, schools, and parks should be under government direction and support. Playground, 10 : 83–96, June 1916.

998. **Fitzpatrick, Edward A.** The political aspects of the community center, or the school building as a civic center. School and society, 4 : 159–65, July 29, 1916.

An address delivered before the National conference on community centers and related problems, New York, April, 1916.

999. **Landgraf, G. H.** Social activities in the high school. Wisconsin journal of education, 48 : 166, 168, 170, 172, June 1916.

Social work in the high school of Marinette, Wisconsin.

1000. **Rosedale, Blanche Cole.** The community center. Educational foundations, 27 : 531–35, May 1916.

An institution which is destined to exercise an influence on American life second only to that of the public schools.

1001. **Sims, Newell L.** The social aspect of the school. Progress, 2 : 209–11, 242–47, May, June, 1916.

An address delivered before the Florida educational association, Tallahassee, December 29, 1915.

1002. **Von Tungeln, George H.** The teacher and community well-being. Journal of home economics, 8 : 279–87, June 1916.

An address delivered before the Home economics division of the Iowa teachers' association at Des Moines, November 4, 1915.

Gives suggestions of community undertakings that can be successfully fostered by teachers.

MORAL EDUCATION.

1003. **B., V.** Les devoirs libres dans l'enseignement moral. Revue pédagogique, 68, 387–94, May 1916.

Description of the work of a class of young girls at Pontoise.

1004. **Heater, Elsor.** Cheating in high school. Ohio educational monthly, 65 : 248–51, June 1916.

An investigation of the extent of cheating among the high school students of Middletown, Conn.

1005. **Kirsch, Felix N.** The education of the individual. Catholic educational review, 11 : 423–32, May 1916.

Calls attention to some of the difficulties of character training and suggests a few general lines of treatment.

1006. Moral conditions in Massachusetts high schools. Journal of education, 83 : 429–30, 438–39, April 20, 1916.

The Committee on moral welfare of the Massachusetts Sunday school association made an investigation to determine if the slanderous statements that had been made about the Massachusetts high schools were true. Quotations from every reply received are given showing that there has not been sufficient grounds for the statements that have been made against the high schools.

RELIGIOUS EDUCATION.

1007. **Methodist Episcopal church, South. Educational conference.** Papers presented at the meetings held April 4–6, 1916, at Birmingham, Ala. Bulletin of the Board of education of the Methodist Episcopal church, South, 6 : 3–112, May 1916.

Contains: 1. Stonewall Anderson: The causes and cure of our educational rivalries and jealousies, p. 3–13. 2. C. H. Trowbridge: Functions and limitations of denominational secondary schools, p. 13–18. 3. W. A. Webb: In what respects should a college for women be different from a college for men? p. 18–26. 4. J. M. Williams: In what respects should a college for women differ from a college for men? p. 26–35. 5. H. E. Stout: The place of the junior college in the system of schools conducted by the church, p. 36–39. 6. J. O. Leath: The relation of the junior college to the standard college, p. 39–45. 7. R. E. Blackwell: The importance of the place of the college in the system of schools conducted by the church, p. 46–49. 8. J. W. Shackford: The joint standardization of courses of religious education for colleges, p. 49–57. 9. G. S. Wyatt: By what method may the church supply means of religious education to her youth attending high schools? p. 57–65. 10. S. E. Mercer: Is college endowment overemphasized? p. 78–86.

1008. **Curley, Michael J.** The aim of Catholic education. Catholic educational review, 12 : 18–26, June 1916.

An address delivered at the dedication of the Cathedral high school, St. Augustine, Florida, April 30, 1916.

1009. Religious education, vol. 11, no. 3, June 1916. (Week-day religious instruction)

Contains: 1. W. M. Wirt: The Gary public schools and the churches, p. 221–26. 2. J. L. Magnes: Attitude of the Jews toward week-day religious instruction, p. 226–30. 3. P. R. McDevitt: The problem of curriculum for week-day religious instruction from the Roman Catholic viewpoint, p. 231–38. 4. H. H. Meyer: The curriculum of week-day religious instruction considered from the Protestant viewpoint, p. 239–44. 5. W. S. Athearn: Teachers for week-day religious schools, p. 245–52. 6. M. C. Settle: Community schools. Upon what conditions can churches of different denominations combine for week-day instruction, p. 252–59. 7. E. S. Lewis: Do present plans endanger our religious liberties? p. 259–70.

1010. **Richardson, Norman E.** Parochial schools and religious day schools in Protestant churches. Religious education, 11 : 336–44, August 1916.

1011. Teaching the Bible in colleges. Religious education, 11 : 314–23, August 1916.

The report of a subcommittee of the department of universities and colleges, on Bible teaching in universities and colleges, based upon results of investigation made in 1915–16.

MANUAL AND VOCATIONAL TRAINING.

1012. **Eastern arts association.** Proceedings sixth annual meeting, Buffalo, N. Y., April 29 to May 1, 1915. 219 p. 8°. (Fred P. Reagle, secretary, Montclair, N. J.)

Contains: 1. W. S. Coffin: Art in the trades, p. 7–19. 2. David Varon: Architecture a factor in education, p. 30–34. 3. A. F. Wiener: Commercial art applied to advertising and suggestions for lessons therein, p. 45–52. 4. A. S. Hurrell: The organization and operation of a technical high school, p. 53–59. 5. E. W. Boshart: Present trend in prevocational education, p. 62–65; Discussion [by] A. E. Dodd, p. 66–68. 6. W. B. Kamprath: The organization and operation of vocational courses in printing, p. 69–80. 7. A. W. Garritt: A manual training course with an industrial purpose, p. 81–85. 8. Cleo Murtland: Some vocational aspects of home economics, p. 106–8. 9. Martha F. King: The manner in which purpose and material limit and condition applied design, p. 113–19; Discussion, p. 120–26. 10. Mary A. Parsons: The minimum essentials in drawing for future grade teachers, p. 127–34. 11. Report of committee on desirable professional status of the manual training teacher, p. 147–56.

1013. **Andrews, Benjamin R.** Progress in practical arts education. Teachers college record, 17 : 233–39, May 1916.

An address before the Teachers college alumni association, February 18, 1916.

1014. **Carman, Kenneth V.** Basing work in industrial arts on the construction of a new building. Teachers college record, 17 : 247–62, May 1916.

A successful experiment carried on in Westfield, N. J.

1015. **Dooley, William H.** The education of the ne'er-do-well. Boston, New York [etc.] Houghton Mifflin company [1916] xi, 164 p. 12°. (Riverside educational monographs, ed. by H. Suzzallo)

Deals with the problem of the large number of boys and girls of limited ability who have to leave school early.

1016. ——— The purpose of a vocational high school. Optimist, 2 : 101–107, April 1916.

Says the distinct purpose of the technical high school is to develop economic efficiency. Nevertheless the pupil should be prepared not merely to become a cog in a wheel, but also to be a human being. This means that every pupil should receive in addition to skill the required education in English, history, and civics. Gives courses of study.

1017. **Field, W. Stanwood.** Vocational training through trade and continuation schools and its relation to the democracy of education. School and society, 3 : 871–78, June 17, 1916.

1018. **Franzoni, Andrea.** La scuola del lavoro. Milano, Direzione e amministrazione [1916] 80 p. 8°. (Quaderni di pedagogia. anno I, ser. I, n. 1. 15 gennaio, 1916)

"Notizie bibliografiche": p. [76]–80.

1019. **Martin, John.** Vocational and occupational education in New York city. Nation, 102 : 696–97, June 29, 1916.

Reviews the work of Wm. Wirt, of Gary, Indiana, and the introduction of the Gary system in New York city.

1020. **Odencrantz, Louise C.** *and* **Potter, Zenas L.** Industrial conditions in Springfield, Illinois. A survey by the committee on women's work and the department of surveys and exhibits, Russell Sage foundation . . . The Springfield survey. Industrial section. New York city, Department of surveys and exhibits, Russell Sage foundation, 1916. 173 p. illus. 8°.

1021. **Rocheron, E.** Du rôle de l'école dans la rénovation de l'apprentissage. Revue pédagogique, 68 : 473–90, June 1916.

A plan for vocational education made necessary by the loss of industrial workers in the war.

1022. **Scott, Leon Wislar.** Practical education—tomorrow's demand. Manual training and vocational education, 17 : 665–73, May 1916.

1023. **Snedden, David.** Problems of art education. School and society, 3 : 685–97, May 13, 1916.

Paper read before the Eastern arts association, Springfield meeting, April 20, 1916.

1024. **Thomas, F. W.** Educational work of the Atchison, Topeka & Santa Fe railway co. How this great progressive railway system trains its apprentice employés. National association of corporation schools, Bulletin, 3 : 20–29, May 1916.

1025. **Van Gaasbeek, Richard M.** Some educational values in productive work. Industrial-arts magazines, 5 : 245–49, June 1916.

The educational values of productive work in the woodworking industry.

1026. **Wade, John E.** Experimenting with prevocational training in New York city. Educational administration and supervision, 2 : 343–53, June 1916.

Discusses the Gary and the Ettinger plans for vocational training in New York city, giving the main features of each.

1027. **Women's educational and industrial union, Boston.** The School of salesmanship. Department store education for saleswomen, for teachers. March 1916. 19 p. 12°.

VOCATIONAL GUIDANCE.

1028. **Hollingworth, H. L.** Vocational psychology; its problems and methods. With a chapter on The vocational aptitudes of women, by Leta Stetter Hollingworth. New York, D. Appleton and company, 1916. xviii, 308 p. 8°.

1029. **National association of corporation schools.** Advance copy of the report of Committee on vocational guidance (The organic development of business) . . . Fourth annual convention, Pittsburgh, Pa., May 30 to June 2, 1916. 148 p. 8°.

1030. **Righter, Leonard.** Vocational guidance a part of regular school work. Industrial-arts magazine, 5 : 346–48, August 1916.

A plan of vocational guidance based on a course in general industrial intelligence in the elementary grades and, as the children advance, the working out of projects with their attendant problems, accompanied by suggestions relative to the occupation most stressed. By such a plan the author says it is hoped the boys and girls will come through their own development to realize their abilities to fill a definite place in the world of workers.

AGRICULTURAL EDUCATION: SCHOOL GARDENS.

1031. **American association of farmers' institute workers.** Proceedings of the twentieth annual meeting . . . held at Berkeley, Cal., August 12–14, 1915. East Lansing, Mich., 1915. 155 p. 8°. (L. R. Taft, secretary, East Lansing, Mich.)

Contains: 1. G. I. Christie: Movable schools of agriculture and their work, p. 42–44; Discussion, p. 44–47. 2. F. S. Cooley: The cooperation of farmers' institutes with other educational agencies, p. 47–56; Discussion, p. 56–59. 3. Bradford Knapp: How can we help the boys? p. 73–76. 4. W. D. Hurd: Shall extension services include the social, recreational and educational improvement of rural and urban districts? p. 124–34. 5. Mrs. H. W. Calvin: Organization and methods in home economics, p. 134–40.

1032. **Association of American agricultural colleges and experiment stations.** Proceedings of the twenty-ninth annual convention of the Association of American agricultural colleges and experiment stations and of the fourth annual convention of the Land-grant college engineering association, held at Berkeley, Cal., August 11–13, 1915. Montpelier, Vt., The Capital City press, 1915. 304 p. 8°. (J. L. Hills, secretary, Burlington, Vt.)

Contains: *Association of American agricultural colleges and experiment stations.* 1. Bills relating to agricultural extension introduced in Congress Dec. 15, 1909, to Dec. 12, 1913, p. 35–44. 2. A. C. True: Report of the Committee on instruction in agriculture, p. 45–70. 3. E. A. Bryan: A national system of education, p. 72–82. 4. A. R. Hill: The preparation of teachers as contemplated in the Nelson amendment, p. 96–100. 5. Samuel Avery: Report of the committee on college organization and policy, p. 104–23. 6. A. Vivian: The correlation of the college of agriculture with the other colleges of the state, p. 130–34. 7. S. P. Capen: The relation of the Bureau of education to the agricultural colleges, p. 140–46. 8. R. A. Pearson: The preparation required for the college teacher in agriculture, p. 156–59. 9. T. F. Hunt: The preparation required for research work in agriculture, p. 159–61. 10. A. C. True: The preparation required for extension work in agriculture, p. 161–65; Discussion, p. 165–68. 11. C. A. Keffer: County organization of extension work in agriculture and home economics, p. 214–20. 12. W. D. Hurd: Shall extension service include the social, recreational and educational improvement of rural and urban districts? p. 232–41. 13. Mrs. H. W. Calvin: Organization and methods in home economics extension, p. 241–46. *Land-grant college engineering association.* 14. C. H. Benjamin: Report of special committee on fees for professional (engineering) services in land-grant colleges, p. 259–71. 15. A. W. Richter: Adaptation of engineering education to local needs, p. 274–77. 16. G. A. Covell: Correlation of courses of study in engineering, p. 277–81. 17. O. V. P. Stout: Lessons to be drawn from the experience of the agricultural experiment stations, p. 286–94.

1033. **Butterfield, Kenyon L.** A state system of agricultural education . . . January, 1916. Boston, Wright and Potter printing company, 1916. 19 p. 8°.

Reprinted from the fifty-third annual report of the Massachusetts agricultural college. Public document 31, Part 1.

1034. **Guss, Roland W.** A graded course of garden work and nature-study. Nature-study review, 12 : 213–25, May 1916.

Outline of the course, grades 1 to 9.

1035. **Randall, John L.** Practical agricultural training for city children. Pennsylvania school journal, 64 : 461–63, April 1916.

Address before the Department of county superintendents of the Pennsylvania educational association.

1036. **Taylor, H. C.** The essentials of agricultural education. Wisconsin journal of education, 48 : 126–30, May 1916.

1037. **Teall, Robert J.** The effective use of the school farm: a record of an unfinished experiment. Manual training and vocational education, 17 : 762–70, June 1916.

The use of a school farm as a means in high-school agricultural education.

HOME ECONOMICS.

1038. **Bevier, Isabel.** Home economics: its opportunities and obligations. School and society, 3 : 737–41, May 20, 1916.

1039. **Boughton, Alice C.** Household arts and school lunches. Cleveland, O., The Survey committee of the Cleveland foundation, 1916. 170 p. plates. 12°.

One of the 25 sections of the report of the education survey of Cleveland conducted by the Survey committee of the Cleveland foundation in 1915.

1040. **Kauffman, Terva E.** The teaching of home economics in the rural schools in connection with the school lunch. Ohio educational monthly, 65 : 313–20, July 1916.

Tells of the work undertaken by the Department of home economics of Ohio state university.

1041. **Loomis, Alice.** Home economics correspondence courses of collegiate grade. Journal of home economics, 8 : 227–31, May 1916.

Presented at the Conference of teachers of home economics in Land grant colleges and universities, held in connection with the Association of American agricultural colleges, Berkeley, Cal., 1915.

COMMERCIAL EDUCATION.

1042. **Eastern commercial teachers' association.** Proceedings of the nineteenth annual convention, New York City, April 20–22, 1916. Business journal, 40 : 438–64, June 1916.

Contains: 1. C. A. Herrick: Articulation of secondary education and higher education, p. 440–44. 2. F. F. Baltz: The aim and extent of a bookkeeping course in secondary schools and classroom methods, p. 444–47. 3. F. C. Schwedtman: Commercial education and the National city bank, p. 447–52. 4. F. H. Sommer: Commercial law, its place and content in the secondary school, p. 452–53. 5. Percy Strauss: Preparing for business, p. 454–56. 6. W. E. Dengler: The aim, content and method of teaching business English, p. 456–60. 7. J. S. Knox: Salesmanship, p. 460–63.

PROFESSIONAL EDUCATION.

1043. **American medical association. Council on medical education.** Report of the twelfth annual conference, held at Chicago, Ill., February 7, 1916. American medical association bulletin, 11 : 83–160, January 15, 1916. (N. P. Colwell, secretary, 535 Dearborn street, Chicago, Ill.)

Contains: 1. N. P. Colwell: Progress in medical education, p. 93–107. 2. James Ewing: Principles and experiments in medical education, p. 120–28. 3. F. S. Lee: A proposed undergraduate course in clinical physiology, p. 129–32; Discussion, p. 132–35. 4. V. C. Vaughn: Educational standards, p. 148–50.

1044. **Association of American law schools.** Handbook . . . and proceedings of the fifteenth annual meeting held at Chicago, Ill., December 28–30, 1915. 122 p. 8°. (Eugene A. Gilmore, secretary-treasurer, Madison, Wis.)

Contains: 1. H. S. Richards: Progress in legal education, p. 60–70. 2. Papers and discussion concerning the Redlich report, p. 77–118.

1045. **National league of nursing education.** Proceedings of the twenty-first annual convention . . . held at San Francisco, Cal., June 21–25, 1915. Baltimore, Williams & Wilkins company, 1915. 235 p. 8°. (Isabel M. Stewart, secretary, Columbia university, New York City)

Contains: 1. Louise M. Powell: Existing affiliations between universities and training schools, p. 107–14. 2. How to help pupil nurses to study, p. 115–22. 3. Anne M. Nicholson: What constitutes good teaching, p. 123–33. 4. H. D. Favill: What the medical profession can contribute to nursing education, p. 153–60. 5. W. H. Smith: The educational function of the hospital, p. 160–69. 6. Lila Pickhardt: Record keeping in schools for nurses, p. 169–73; Discussion, p. 173–76. 7. Carolyn Gray: Self-government—its advantages and limitations as applied to schools of nursing, p. 192–98; Discussion, p. 198–205.

1046. **Barker, Lewellys F.** The teaching of clinical medicine. Science, 43 : 789–10, June 9, 1916.

Read at the meeting of the Association of American medical colleges, Chicago, February 1916. Writer deals with the development of the teaching of the science and art of diagnosis.

1047. **Councilman, W. T.** Further reflections of a medical teacher. Journal of the American medical association, 66 : 2045–51, June 24, 1916.

Comparison of German and American methods of teaching, etc.

1048. **Harris, D. Fraser.** The influence of Greece on science and medicine. Scientific monthly, 3 : 51–65, June 1916.

An interesting historical sketch.

1049. **Smith, Alexander.** The training of chemists. Science, n. s. 43 : 619–29, May 5, 1916.

A plea for more research work and adequate training. Discusses standard courses, equipment, etc.

An address delivered in Urbana, at the opening of the chemical laboratory of the University of Illinois.

1050. **Thayer, William S.** Teaching and practice. Science, n. s. 43 : 691–705, May 19, 1916.

Discusses the problems which confront the director of a department of medicine today.

Address of the president of the Congress of American physicians and surgeons delivered at Washington, May 9, 1916.

CIVIC EDUCATION.

1051. Citizenship syllabus. Prepared by Research department of the Committee for immigrants in America. Albany, N. Y., New York state department of education, 1916. 48 p. 8°.

Reprinted in Atlantic educational journal, 11 : 459–64, 518–24, May, June 1916.

"Although the material here presented was designed for classes of immigrants, it will prove equally serviceable for any class of students beginning the study of civics."

1052. **Ellis, Dayton.** Community life and social problems. Pennsylvania school journal, 64 : 561–67, June 1916.

Gives a plan of teaching civics based on community life. First the class briefly reviews the civics taught in the grades and then a rather detailed study is made of the industrial (vocational), educational, religious, social (home), and political phases of community life.

1053. **Foster, G. A.** Making good citizens. School education, 35 : 8–9, June 1916.

A course in civics, not in the technical sense of the word, but through thought, speech, and action materially assisting in preparing boys and girls to live lives of usefulness, and to get a clearer viewpoint for the technical study of the subjects of civics in the high school course.

MILITARY TRAINING.

1054. **Creel, George.** Military training for our youth. Century magazine, 92 : 20–26, May 1916.

Writer contends that compulsory military training will contribute to the wholesomeness and virility of the race. It will heighten patriotism, and improve the physique of youth.

1055. **Meiklejohn, Alexander.** A schoolmaster's view of compulsory military training. School and society, 4 : 9–14, July 1, 1916.

Address before the Academy of political science, May 18, 1916.

Discusses the proposal of universal compulsory military training as a matter of educational policy.

SCHOOLS FOR MAIMED SOLDIERS.

1056. **Bouglé, C.** Entre les deux rives, une conférence sur les écoles de mutilés. Revue pédagogique, 68 : 269–77, April 1916.

Shows the possibility of the schools for the wounded in developing the industrial resources of France after the war.

1057. **Hannan, Thomas.** Technical schools for maimed soldiers: L'école Joffre. Contemporary review, 110 : 105–12, July 1916.

A movement in France for the "re-education" of soldiers who have been so injured in the war that they will not be able to follow their former employment. First school was established in Lyons. Other cities and towns have followed rapidly in the steps of Lyons.

EDUCATION OF WOMEN.

1058. **Southern association of college women.** Proceedings of the thirteenth annual meeting, April 13–15, 1916, Montgomery, Ala. 108 p. 8°. (Mary L. Harkness, secretary, New Orleans, La.)

Contains: 1. Elizabeth A. Colton: The changing emphasis in the education of women in the South, p. 11-15. 2. W. W. Guth: First things first, p. 15–21.

1059. **Cannon, Mary Agnes.** The education of women during the Renaissance. Washington, D. C., 1916. 182 p. 8°.

A dissertation submitted to the Catholic sisters college of the Catholic University of America in partial fulfillment of the requirements for the degree doctor of philosophy.

CONTENTS.—Preface.—I. Italy.—II. Spain and Portugal.—III. England.—IV. France.—V. Northern Europe.—Bibliography.

1060. **Conference on the prospective work of Carson college for girls and Charles E. Ellis college.** Care and training of orphan and fatherless girls. Proceedings of a Conference . . . held at Philadelphia, October 13–14, 1915, on the invitation of the trustees of Carson college and Ellis college. Published by the Wm. F. Fell company [1916] 236 p. plates. 8°.

1061. **Ferris, Helen J.,** *ed.* The new world and the college woman. Contributions by women college graduates who have adventured in the modern work-a-day world and found their places there. Bookman, February-May 1916.

CONTENTS.—I. A pageant of college women, by Ella McCaleb.—II. The business of play, by Mathilde Vossler.—III. Opportunities for college women in library work, by Mary Emogene Hazeltine (42 : 678–91, February 1916)—IV. An editorial experience, by Gabrielle Elliot.—V. Conserving the immigrant girl, by Edith L. Jardine.—VI. A bacteriologist at work, by Ruth O. Pierson (43 : 63–74, March 1916)—VII. The school garden, by M. Louise Greene.—VIII. College women in business, by Mary A. White.—IX. Training for efficiency in the department store, by Mrs. Lucinda W. Prince (43 : 183–93, April 1916)—X. Adventures in practical aesthetics, by Antoinette R. Perrett.—XI. The college graduate in welfare work, by Helen J. Ferris.—XII. Secretarial work and the college woman, by Ann E. Thomas (43 : 286–97, May 1916).

1062. **Perry, Lorinda.** Millinery as a trade for women . . . Prepared under the direction of Susan Myra Kingsbury and Marion Parris Smith . . . New York, London [etc.] Longmans, Green, and company, 1916. 134 p. 8°. (Women's educational and industrial union, Boston. Department of research. Studies in economic relations of women, vol. 5)

Submitted in partial fulfilment for the degree of doctor of philosophy in the department of economics, Bryn Mawr college.

1063. **Richards, Florence L.** The dean of women. American schoolmaster, 9: 241–51, June 1916.

Adapted from a paper read at the meeting of the North Central association of normal school presidents, at Chicago, February 18, 1916.

Discusses the various duties of the dean of women.

1064 **Richmond, Winifred.** Present practices and tendencies in the secondary education of girls. Pedagogical seminary, 23 : 184–98, June 1916.

Discusses the following questions: segregation, home economics, housecraft or homecraft schools, vocational courses and trade schools, and continuation schools.

1065. **Vassar, Matthew.** The autobiography and letters of Matthew Vassar, ed. by Elizabeth Hazelton Haight. New York, Oxford university press, American branch, 1916. 210 p. illus. 8°.

1066. **Vassar college.** The fiftieth anniversary of the opening of Vassar college, October 10 to 13, 1915; a record. Poughkeepsie, N. Y., Vassar college, 1916. 337 p. plates. 8°.

NEGRO EDUCATION.

1067. **Sibley, James L.** County training schools in Alabama. Southern workman, 45 : 407–12, July 1916.

Work of the new type of school for negro youth in the South, fostered by the States board in cooperation with the public school authorities in the counties.

1068. **Willcox, William G.** Tuskegee's contribution to natural efficiency. Southern workman, 45 : 446–48, August 1916.

EDUCATION OF IMMIGRANTS.

1069. **Lenz, Frank B.** The education of the immigrant. Educational review, 51 : 469–77, May 1916.

Discusses the education of immigrant adults and evening schools for foreigners. Advocates supplementary activities; and mentions the main assimilative activities of the immigrant child.

1070. **Miller, Herbert A.** The school and the immigrant. Cleveland, O., The Survey committee of the Cleveland foundation, 1916. 102 p. 12°.

One of the 25 sections of the report of the education survey of Cleveland conducted by the Survey committee of the Cleveland foundation in 1915.

EDUCATION OF DEAF.

1071. **Nitchie, Edward B.** Principles and methods of teaching lip-reading. Volta review, 18 : 269–80, July 1916.

Explains his method of lip-reading Lays emphasis on the mental-factor. Discusses the subject under the following heads: 1. Synthetic power of the mind; 2. The intuitive power of the mind; 3. Quickness of mind; 4. Alertness of mind; 5. The power of concentration.

1072. Statistics of speech-teaching in American schools for the deaf. Volta review, 18 : 200–13, May 1916.

Gives list of schools for the deaf in the United States on March 1, 1916, with extensive statistics.

EXCEPTIONAL CHILDREN.

1073. **Cornman, Oliver P.** Special classes in the public schools. The backward and the mentally deficient pupil. Current education, 20 : 143–46, May 1916.

Abstract of an address given at the exhibit on feeblemindedness, held under the auspices of the Public charities association of Pennsylvania.

1074. **Edson, Andrew W.** The problem of the feeble-minded child in the public schools. Ungraded, 1 : 189–93, April 1916.

Gives some suggestions for the treatment of feeble-minded children in the public schools.

1075. **Goddard, H. H.** Defectives in the schools. Teaching, 2 : 5–18, April 1, 1916.

1076. **McMurtrie, Douglas C.** Industrial training in Edinburgh for crippled boys and girls. American journal of care for cripples, 3 : 10–16, 1916.

Reprinted by permission from the Journal of the Missouri state medical association, St. Louis, 1916, xiii, p. 78–81.

EDUCATION EXTENSION.

1077. **Wisconsin state board of industrial education.** Papers and discussions, Conferences of teachers, Wisconsin public industrial, commercial, continuation and evening schools . . . Madison, Published by the Board, 1916. 113 p. 8°. (*Its* Bulletin no. 13)

LIBRARIES AND READING.

1078. **Ayres, Leonard P.** *and* **McKinnie, Adele.** The public library and the public schools. Cleveland, O., The Survey committee of the Cleveland foundation, 1916. 93 p. illus. 12°.

One of the 25 sections of the report of the education survey of Cleveland conducted by the Survey committee of the Cleveland foundation in 1915.

1079. **Bostwick, Arthur E.** How the community educates itself. Library journal, 41 : 541–47, August 1916.

Read before the American library association, Asbury Park, N. J., June 27, 1916.

1080. **Cabot, Ella Lyman.** Children's reading as a help in training character. Religious education, 11 : 207–20, June 1911.

1081. **Hudson, Jay William.** The library and the modern university. Public libraries, 21 : 293–97, July 1916.

Address at the formal opening of the new library building at the University of Missouri, Columbia, January 6, 1916.

1082. **Logasa, Hannah.** Some phases of library-study-room management. School review, 24 : 352–58, May 1916.

Gives a list of study helps for students of the University high school, Chicago, Ill.

1083. **Walter, Frank K.** The coming high-school library. New York libraries, 5 : 78–81, May 1916.

Paper read at meeting of the library section of the New York state teachers' association, November 23, 1915. Also published in Journal of the New York state teachers' association, 3 : 137–41, May 1916.

BUREAU OF EDUCATION: RECENT PUBLICATIONS.

1084, Advancement of the teacher with the class; by James Mahoney. Washington, 1916. 81 p. (Bulletin, 1915, no. 42)

1085. Education exhibits at the Panama-Pacific International exposition, San Francisco, Cal., 1915; by W. Carson Ryan, jr. Washington, 1916. 113 p. illus. (Bulletin, 1916, no. 1)

1086. Federal laws, regulations, and rulings affecting the land-grant colleges of agriculture and mechanic arts. Washington, 1916. 19 p.

1087. The institutional budget; by Hollis Godfrey. Washington, 1916. 16 p. (Higher education circular, April 1916)

1088. Monthly record of current educational publications. Index, February, 1915–January, 1916. Washington, 1916. 28 p. (Bulletin, 1916, no. 15)

1089. Needed changes in secondary education. Two papers presented at the Pan American scientific congress, Washington, D. C., December 27, 1915, to January 8, 1916; by Charles William Eliot and Ernesto Nelson. Washington, 1916. 32 p. (Bulletin, 1916, no. 10)

1090. Problems involved in standardizing state normal schools; by Charles Hubbard Judd and Samuel Chester Parker. Washington, 1916. 141 p. illus. (Bulletin, 1916, no. 12)

PERIODICALS REPRESENTED IN THIS NUMBER.

America, 59 East Eighty-third street, New York, N. Y.
American journal of care for cripples, 3505 Broadway, New York, N. Y.
American journal of sociology, University of Chicago press, Chicago, Ill.
American physical education review, 93 Westford avenue, Springfield, Mass.
American school, P. O. Box 134, Milwaukee, Wis.
American school board journal, 129 Michigan street, Milwaukee, Wis.
American schoolmaster, State normal college, Ypsilanti, Mich.
Atlantic educational journal, 19 West Saratoga street, Baltimore, Md.
Atlantic monthly, 4 Park street, Boston, Mass.
Better schools, Painesville, Ohio.
Bookman, Fourth avenue and Thirtieth street, New York, N. Y.
British journal of psychology, London, England.
Bulletin of the Board of education of the Methodist Episcopal Church, South, Nashville, Tenn.
Business journal, 20 Vesey street, New York, N. Y.
Calcutta review, Calcutta, India.
Catholic educational association bulletin, 1651 East Main street, Columbus, Ohio.
Catholic educational review, Washington, D. C.
Catholic historical review, Washington, D. C.
Century magazine, 353 Fourth avenue, New York, N. Y.
Child-welfare magazine, 227 South Sixth street, Philadelphia, Pa.
Classical journal, University of Chicago press, Chicago, Ill.
Contemporary review, 249 West Thirteenth street, New York, N. Y.
Cosmopolitan student, Cambridge, Mass.
Current education, Philadelphia, Pa.
Education, 120 Boylston street, Boston, Mass.
Educational administration and supervision, Warwick and York, Baltimore, Md.
Educational bi-monthly, Board of Education, Chicago, Ill.
Educational conference, Whitewater, Wis.
Educational foundations, 31–33 East Twenty-seventh street, New York, N. Y.
Educational review, Columbia university, New York, N. Y.
Elementary school journal, University of Chicago press, Chicago, Ill.
Engineering education, Lancaster, Pa.
English journal, University of Chicago press, Chicago, Ill.
Hibbert journal, 6 Beacon street, Boston, Mass.
High school quarterly, Athens, Ga.
Independent, 119 West Fortieth street, New York, N. Y.
Industrial-arts magazine, 129 Michigan street, Milwaukee, Wis.
Journal of education, 6 Beacon street, Boston, Mass.
Journal of educational psychology, Warwick and York, Baltimore, Md.
Journal of experimental pedagogy, London, England.
Journal of geography, Madison, Wis.

Journal of home economics, Station N, Baltimore, Md.
Journal of the American medical association, 535 Dearborn street, Chicago, Ill.
Journal of the Association of collegiate alumnae, University of Chicago press, Chicago, Ill.
Journal of the New York state teachers' association, 5 South Water street, Rochester, N. Y.
Kentucky high school quarterly, Lexington, Ky.
Library journal, 241 West Thirty-seventh street, New York, N. Y.
Manual training and vocational education, Manual arts press, Peoria, Ill.
Mathematics teacher, 41 North Queen street, Lancaster, Pa.
Minnesota state normal schools quarterly journal, Minneapolis, Minn.
Modern hospital, St. Louis, Mo.
Mother's magazine, David C. Cook publishing company, Elgin, Ill.
Nation, P. O. Box 794, New York, N. Y.
National association of corporation schools, Bulletin, Irving place and Fifteenth street, New York, N. Y.
National review, London, England.
Nature-study review, University of Chicago press, Chicago, Ill.
Nebraska teacher, Lincoln, Nebr.
New republic, 421 West Twenty-first street, New York, N. Y.
New York libraries, Albany, N. Y.
Nineteenth century, 249 West Thirteenth street, New York, N. Y.
Ohio educational monthly, Columbus, Ohio.
Ohio history teachers' journal, Ohio state university, Columbus, Ohio.
Optimist, Scranton, Pa.
Outlook, 287 Fourth avenue, New York, N. Y.
Pedagogical seminary, Worcester, Mass.
Pennsylvania school journal, Lancaster, Pa.
Physical training, 124 East Twenty-eighth street, New York, N. Y.
Pittsburgh school bulletin, Pittsburgh, Pa.
Playground, 1 Madison avenue, New York, N. Y.
Popular educator, 50 Bromfield street, Boston, Mass.
Progress, Athens, Ga.
Psychological clinic, Woodland avenue and Thirty-sixth street, Philadelphia, Pa.
Public libraries, Library bureau, Chicago, Ill.
Quarterly journal of public speaking, University of Chicago press, Chicago, Ill.
Quarterly journal of the University of North Dakota, University, N. Dak.
Religious education, 332 South Michigan avenue, Chicago, Ill.
Revue de l'enseignement des langues vivantes, Paris, France.
Revue des deux mondes, Paris, France.
Revue internationale de l'enseignement, Paris, France.
Revue pédagogique, Paris, France.
Revue universitaire, Paris, France.
School and home education, Bloomington, Ill.
School and society, The Science press, Garrison, N. Y.
School education, Minneapolis, Minn.
School journal, Mt. Vernon, N. Y.
School news and practical educator, Taylorville, Ill.
School review, University of Chicago press, Chicago, Ill.
School science and mathematics, Mount Morris, Ill.
Science, Substation 84, New York, N. Y.
Scientific American supplement, 361 Broadway, New York, N. Y.
Scientific monthly, The Science press, Garrison, N. Y.
Scribner's magazine, 597 Fifth avenue, New York, N. Y.

Sierra educational news, San Francisco, Cal.
Southern school journal, Lexington, Ky.
Southern workman, Hampton, Va.
Stanford alumnus, Stanford university, Cal.
Teachers college record, Teachers college, Columbia university, New York, N. Y.
Teaching, State normal school, Emporia, Kans.
Ungraded, 1701 Fulton avenue, New York, N. Y.
Utah educational review, Salt Lake City, Utah.
Virginia state teachers' association quarterly, Richmond, Va.
Volta review, Volta bureau, Washington, D. C.
Western journal of education, San Francisco, Cal.
Wisconsin journal of education, Madison, Wis.
World's work, Garden City, N. Y.
World's work, London, England.
Wyoming school journal, Laramie, Wyo.
Yale review, 135 Elm street, New Haven, Conn.

BULLETIN OF THE UNITED STATES BUREAU OF EDUCATION.[1]

[NOTE.—Documents marked with an asterisk (*) may be obtained only from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the price indicated. Remittances should be made direct to the Superintendent of Documents in coin, currency, or money order. Stamps are not accepted. Other publications will be sent free of charge upon application to the Commissioner of Education, as long as the limited supply lasts.]

1913.

*No. 1. Monthly record of current educational publications, January, 1913. 5 cts.
*No. 2. Training courses for rural teachers. A. C. Monahan and R. H. Wright. 5 cts.
*No. 3. The teaching of modern languages in the United States. Charles H. Handschin. 15 cts.
*No. 4. Present standards of higher education in the United States. George E. MacLean. 20 cts.
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*No. 6. Agricultural instruction in high schools. C. H. Robison and F. B. Jenks. 10 cts.
*No. 7. College entrance requirements. Clarence D. Kingsley. 15 cts.
*No. 8. The status of rural education in the United States. A. C. Monahan. 15 cts.
*No. 9. Consular reports on continuation schools in Prussia. 5 cts.
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